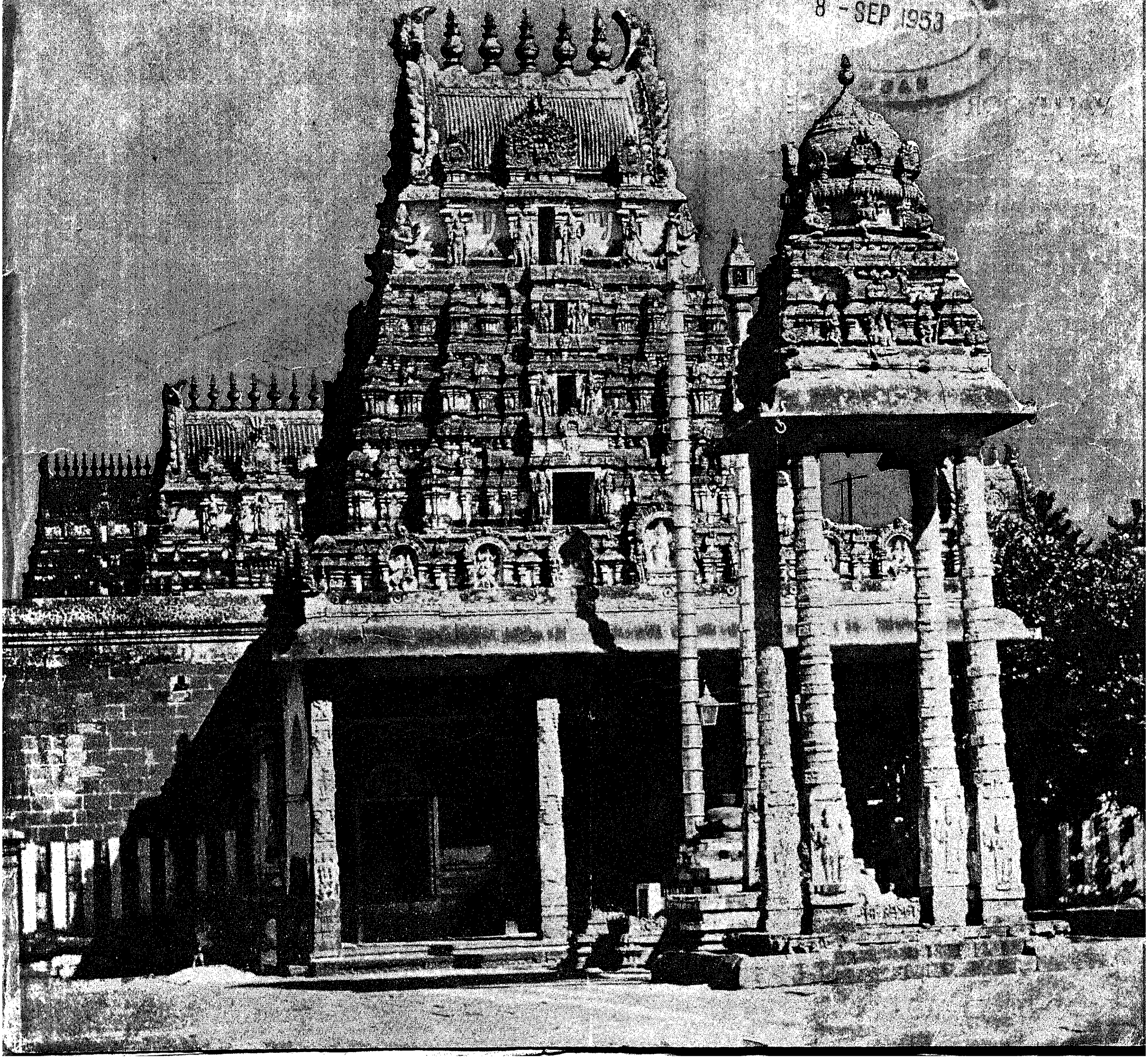
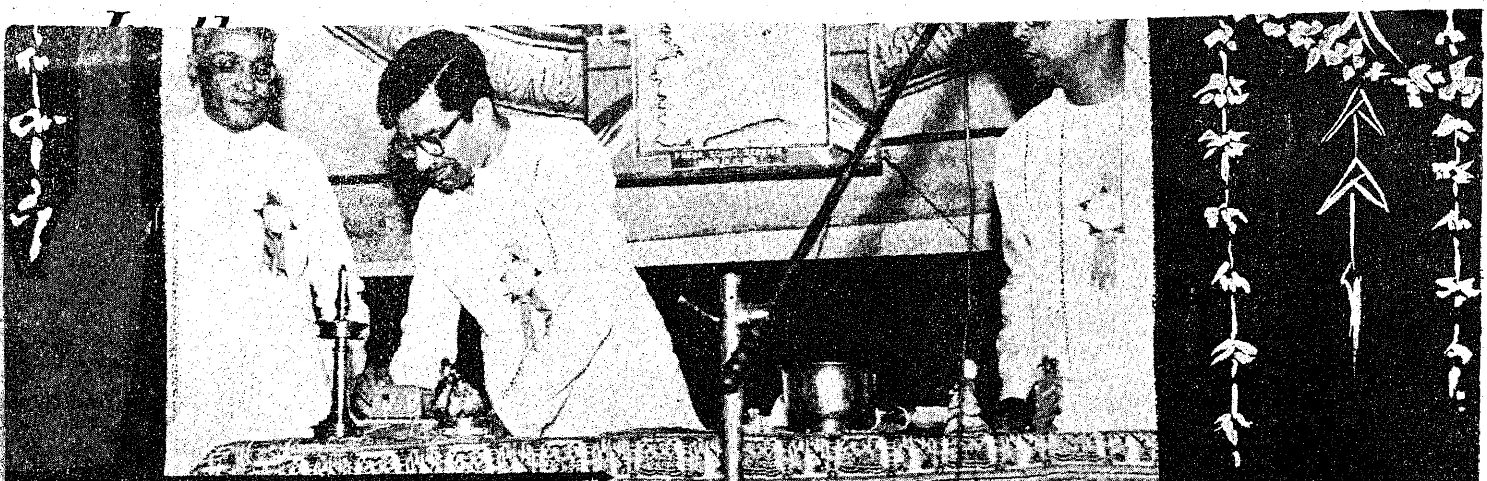
Madras Information

SEPTEMBER - 1958

8 - SEP 1958

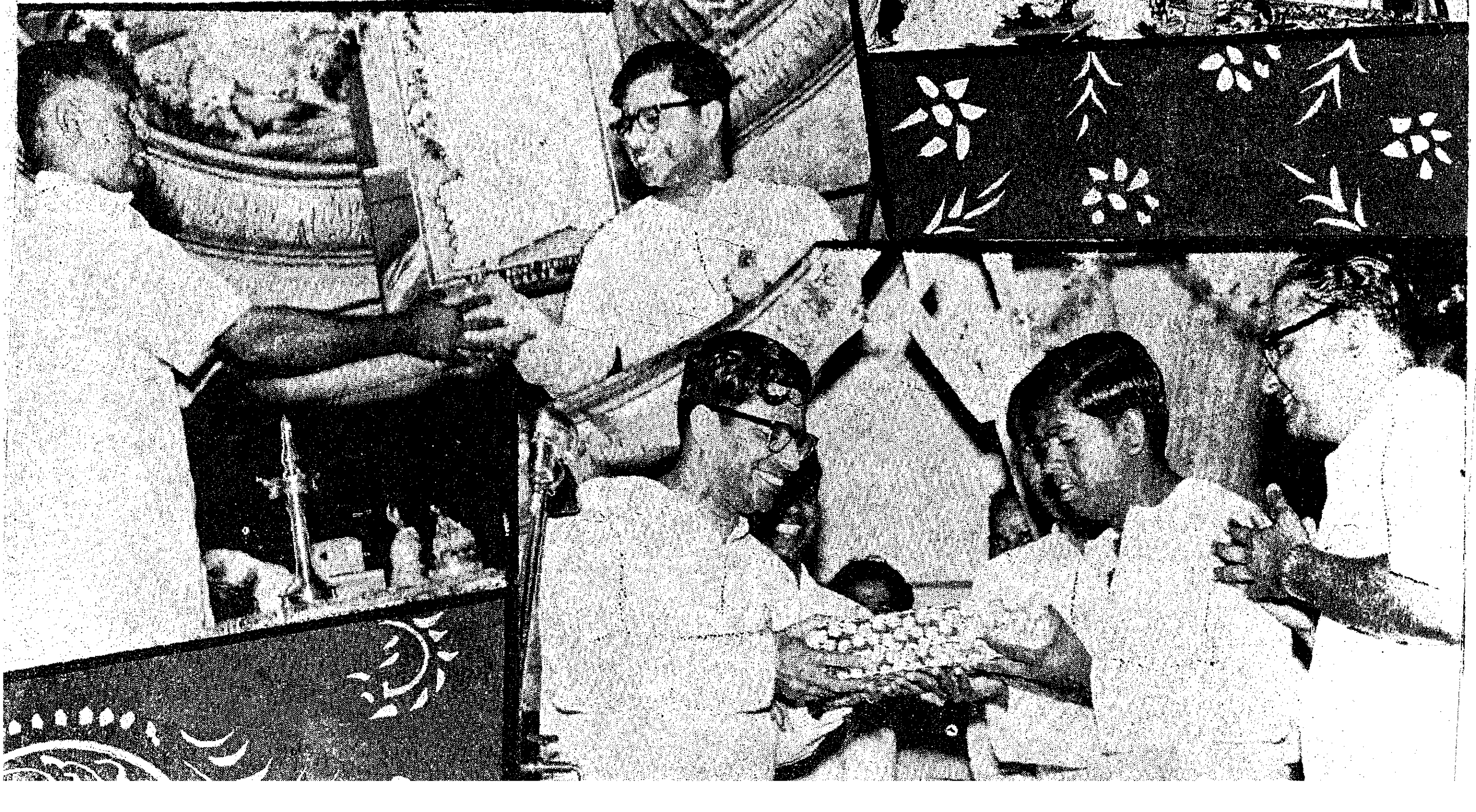




VALLIYOOR CONFERENCE

Sri C. Subramaniam, Minister for Education inaugurated the Pilot Project Co-ordination Conference of the Valliyoor Block at Valliyoor on July 25th.

(*Please see the note on page* 21)



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Cover page:
Sri Varadharaja Perumal Temple at Kancheepuram in the Chingleput District.

8 - SEP 1958

MADRAS INFORMATION

Vol. XII, No. 9 September 1958

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8 - SEP 1958

The Governor's arrival.

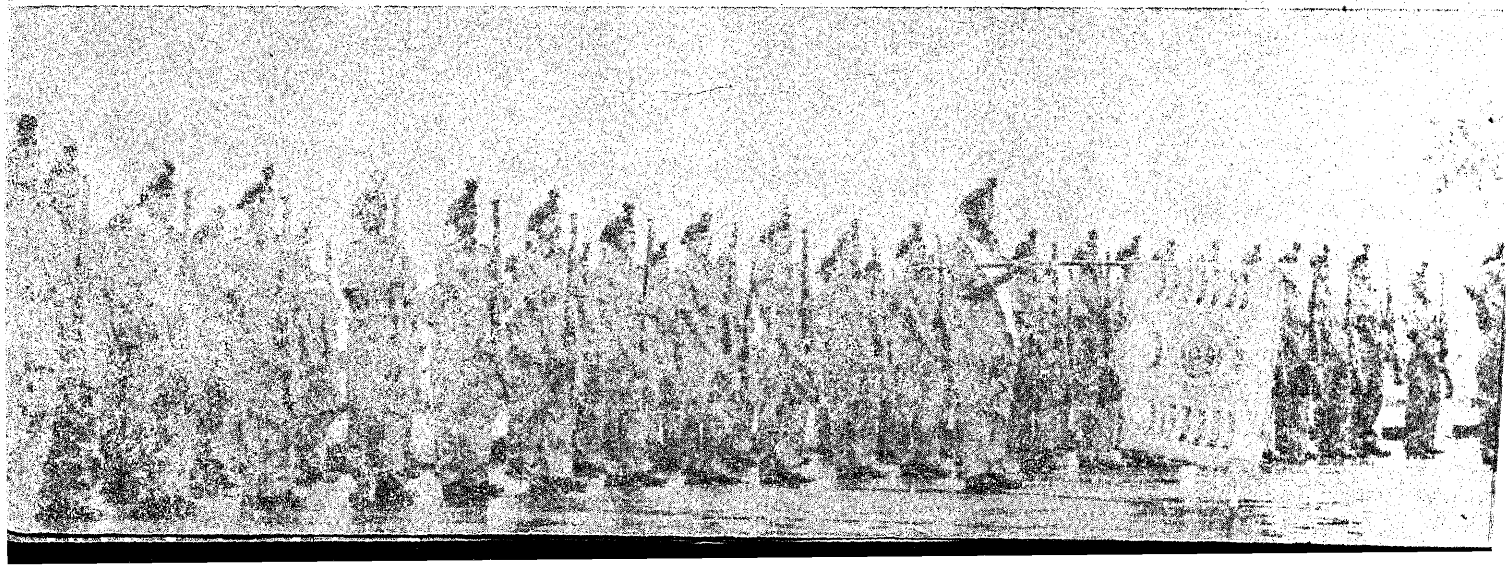
Independence Day was celebrated on a modest scale in the City this year. In the, morning the Governor, Sri Bishnuram Medhi, unfurled the National Flag at the Fort St. George.

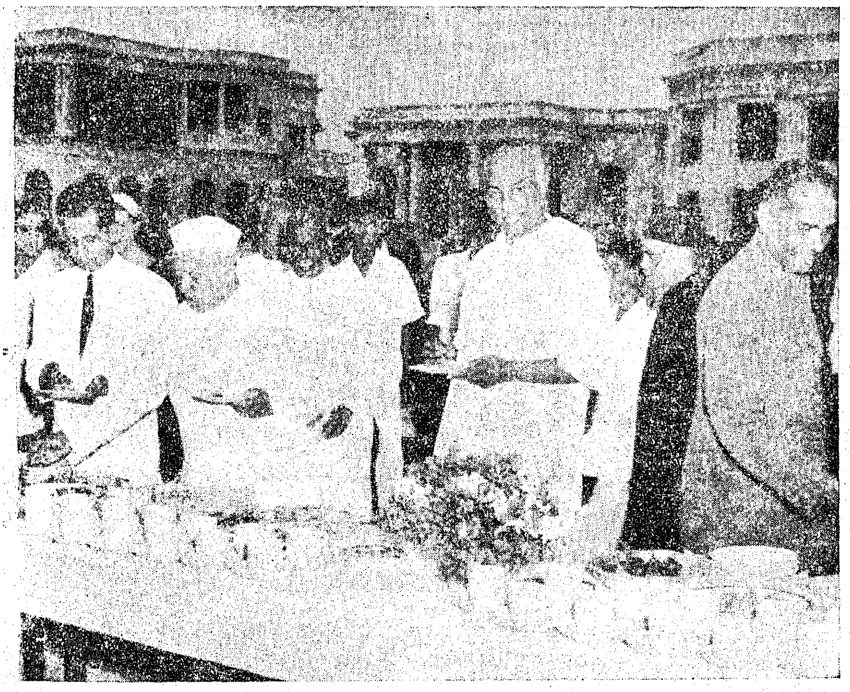
On his arrival at the Fort, the Governor was received by Sri T. N. S. Raghavan, I.C.S., First Member, Board of Revenue, in the absence of the Chief Secretary. After inspecting a Guard of Honour, the Governor unfurled the National Flag.

In the evening the Governor gave a garden party at the Raj Bhavan.

INDEPENDENCE DAY IN THE CITY

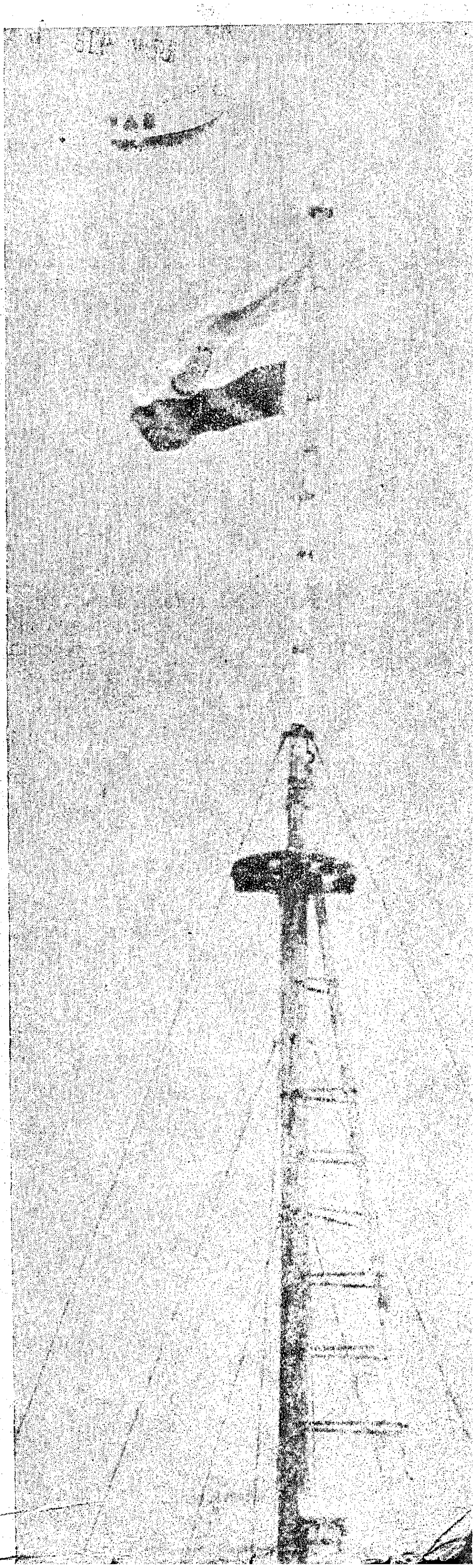
Salute to the National Flag.





At the party.

Hoisting the Flag.



Know Your District :

CHINGLEPUT

Chingleput district lies on the East Coast of Madras State. It is bounded on the east by Bay of Bengal, on the north by Nellore district, on the west by North Arcot and Chittoor districts and on the south by South Arcot district. Madras City, the capital of the State, lies on the coast of Bay of Bengal and is surrounded on three sides by Chingleput district. The district is elongated in shape from south to north with a coast line of nearly 115 miles. The area of the district is 3,061 square miles and its population as per 1951 census is 1,8,53,619. The district is divided into seven taluks, viz., Ponneri, Tiruvallur, Sriperumpudur, Saidapet, Kancheepuram, Chingleput and Madurantagam.

General Features.

The country is plain for the most part with ridges of blown sand along the sea coast and is hilly in some places. The Nagalapuram, Satyavedu and Kanbakkam hills in the western part of Ponneri taluk are the important hills in the district.

The chief rivers of the district are the Palar, the Kortalayar, and the Arni rivers. The Palar having its source in Mysore State, flows through the Chittoor district and the entire breadth of North Arcot and Chingleput districts.

The Kortalayar river has its source in the Chittoor district and its waters are drawn into the Cholavaram tank and the Red Hills lake for supply of drinking water to the Madras City.

Arni river which has its source in Puttur taluk in Chittoor district flows along the major part of the boundary between Ponneri and Tiruvallur taluks and enters the sea at Pulicat swamps.

The Cooum and Adyar though not large are two well-known rivers in the district which enter the sea at Madras.

Forests.

The area covered by forests in the district is about 310 square miles and the average rainfall is about 46 inches. Two-thirds of the total rainfall is during the north-east monsoon that is from October to December. April to June are the hottest months for the district.

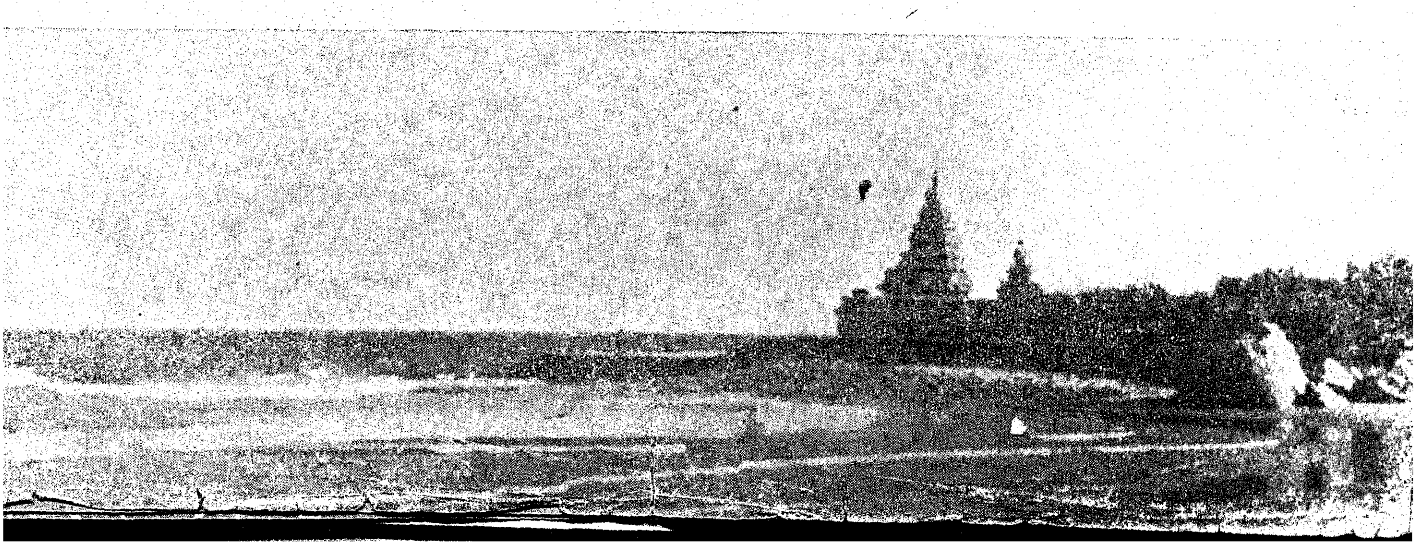
Soils.

There are three classes of soils in the district, viz., black, red and argillaceous with sub-classes loam, clay and sand under each. The black soil is generally more fertile than red while the argillaceous is useful only for casuarina plantations. The red soil predominates in the northern taluks while black is prevalent in the southern taluks.

Cultivation.

The chief agricultural produce of the district is paddy and the important marketing centres are Kancheepuram, Madurantagam, Chingleput and Tiruvallur. The largest market being Madras, the State capital, produce from places within a radius of about 30 miles are usually transported by roads on country carts and lorries. It is only beyond this radius from Kancheepuram and Madurantagam that they are transported by rail. Due to scarcity of wagon and the advent of lorry traffic, nowadays goods are also being transported by road to some extent from places even beyond Madurantagam.

The Shore Temple at Mahabalipuram.



Places of interest.

The district is famous for its sacred temples and pilgrim centres attracting large crowds of people from all parts of the State. The following are a few of the important ones :—

Kancheepuram is famous as a pilgrim centre and contains a number of Hindu temples, the most famous among them being those dedicated to Sri Ekhambareswarar, Sri Varadarajaperumal and Sri Kamakshi Amman. Kancheepuram is also famous for its silk sarees and is a very big handloom centre.

Sriperumpudur, the birth place of Sri Ramanuja, is also an important place of pilgrimage in the district.

Kunrathur in Sriperumpudur taluk is famous for the manufacture of lungis and kylis. This is also the birth place of Sri Sekizhar, the author of "Periapuranam".

Thirukalikundram as the name implies is the hill of Holy Kites. This is a famous pilgrim centre in the district attracting large crowds for the sight of two white kites coming every day just before noon and taking food from the hands of a priest. High up on a hill which is about 500 feet high there is a rock-cut-temple dedicated to Lord Siva (known here as Vedagiriswara).

The mosque and church at Covelong in Chingleput taluk are important for Muslims and Christians respectively.

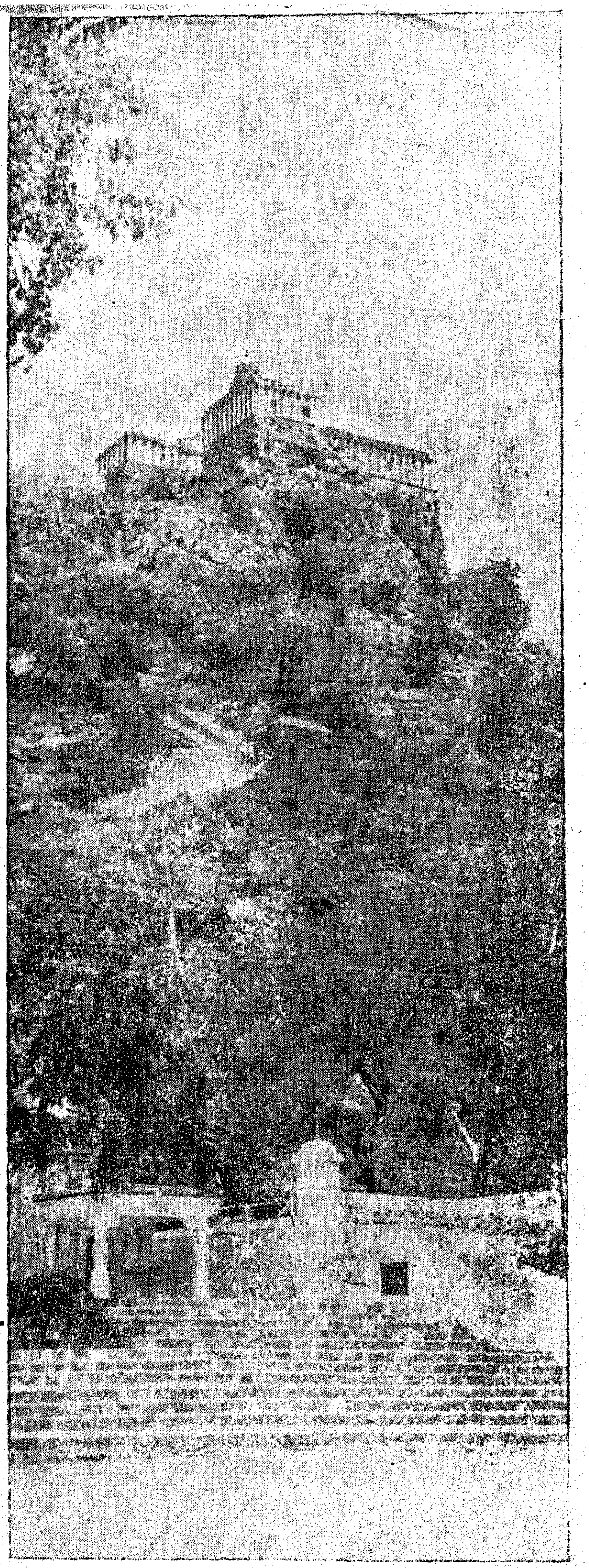
The calingula of the Madurantagam tank is a fine piece of masonry construction and is built in the form of a wavy line.

Mahabalipuram on the coast in Chingleput taluk is a place of architectural interest depicting the art and culture of the Pallavas who ruled the place a long time back. The shore temple and the monolithic chariots, elephant and Arjuna's Penance are magnificient pieces of sculpture which attract thousands of tourists throughout the year not only from other parts of India but from other countries also. It can be reached by a direct blacktopped road from Madras.

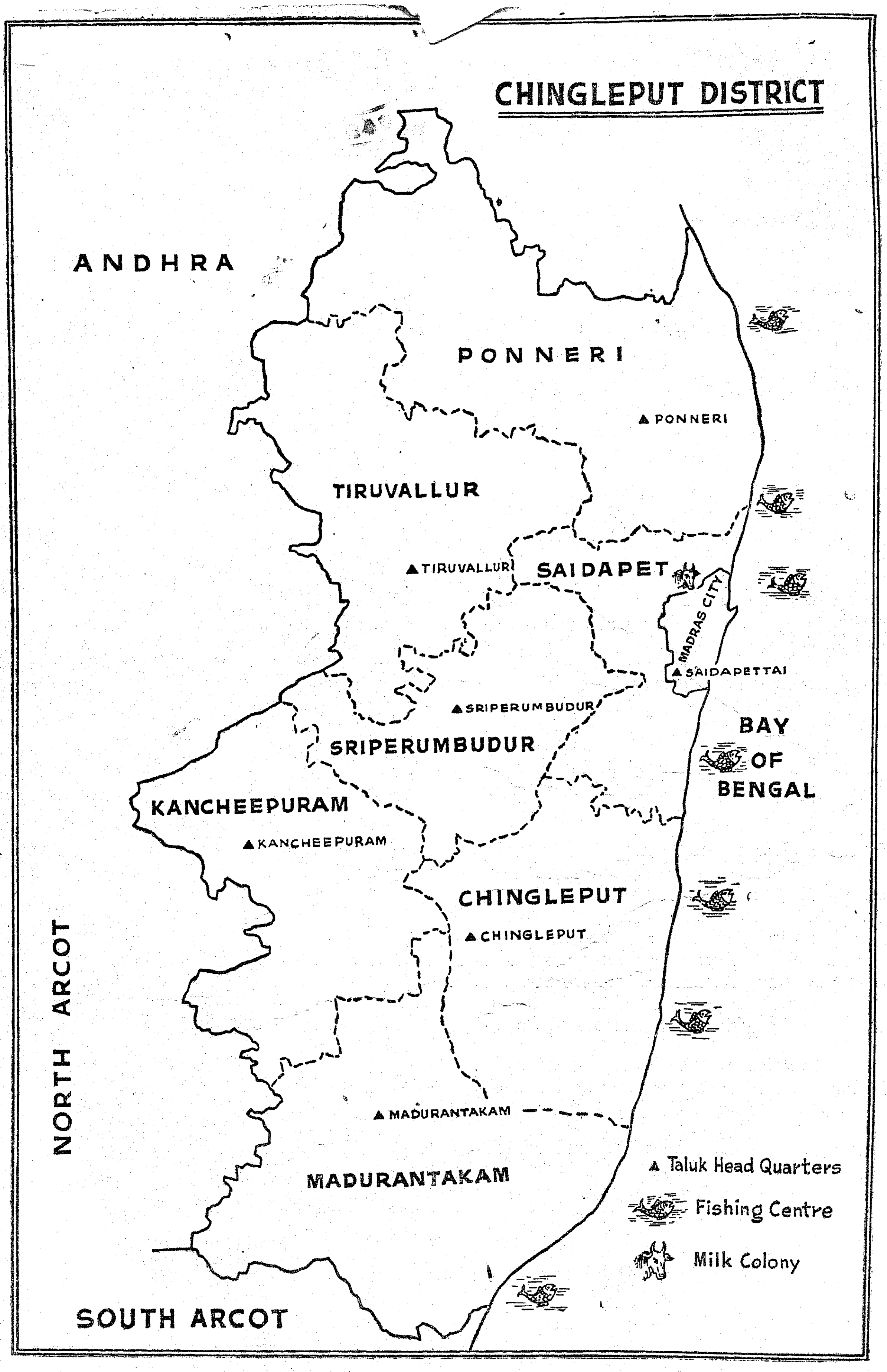
There are two light-houses in the district one at Pulicat in Ponneri taluk and the other at Mahabalipuram in Chingleput taluk.

Pulicat in Ponneri taluk, Alambarai in Madurantagam taluk and Covelong and Sadras in Chingleput taluk were Dutch settlements on the coast. There are still ruins of Dutch Forts to be seen at these places.

Kanbakkam hill near Varadayyapalayam is a small hill station with an inspection bungalow for halt and has very good climate. Its development as a very big hill station was considered some years ago but had been dropped.



The Hill Temple at Thirukalikundram.


CHINGLEPUT DISTRICT
ANDHRA
PONNERI
▲ PONNERI
TIRUVALLUR
▲ TIRUVALLUR
SAIDAPET
MADRAS CITY
▲ SAIDAPETTAI
▲ SRIPERUMBUDUR
SRIPERUMBUDUR
BAY OF BENGAL
KANCHEEPURAM
▲ KANCHEEPURAM
CHINGLEPUT
▲ CHINGLEPUT
NORTH ARCOT
▲ MADURANTAKAM
MADURANTAKAM
▲ Taluk Head Quarters
Fishing Centre
Milk Colony
SOUTH ARCOT

At Avadi and Kadapparai there are rest-houses under the charges of Highways Department. At Gummidipoondi, Guduvancheri, Acharapakkam and Karunguli, there are travellers' bungalows looked after by the Highways Department.

Industries.

The Link Industries, Limited, have a factory in Chingleput for the manufacture of zip fasteners, the only one of its kind in the State. Poondi Reservoir (Satyamurthisagar) intended for augmenting the supply of drinking water to the Madras City is at a distance of six miles from Tiruvallur. There is an Irrigation Research Station at Poondi near the reservoir. The Stoneware Pipes, Limited, located at Tiruvallur are making glazed stoneware pipes useful for drainage and water-supply. The Western India Match Factory at Tiruvottiyur is one of the biggest manufacturing concerns of matches in South India. The Wood Screw Factory and Pilot Pen Factory are other industries started in Saidapet taluk.

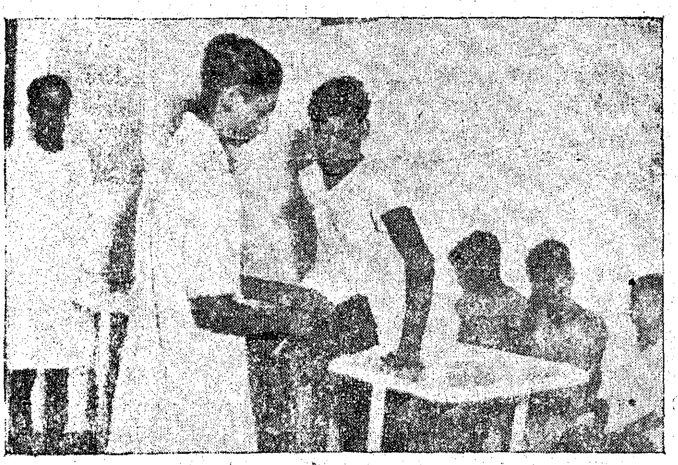
The Civil Aerodrome and the Madras Flying Club are at Meenambakkam, ten miles from Madras on the Great Southern Trunk Road. The T.I. Cycle Works at Ambattur, the Ashok Leyland Motors at Ennore and the Standard Motor Company at Vandalur are the important cycle and automobile engineering enterprises in India.

Communications.

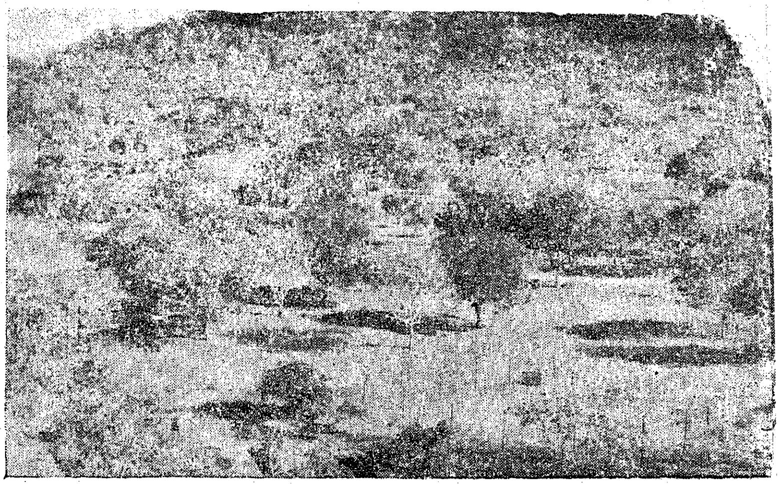
The district is served by the following communications :—

1. Railways—
   Broad gauge—58-4 miles.
   Metre gauge—89-2 miles.

2. Canals—98 miles.



One of the patients being treated at the Hospital at Thirumani.



A view of the Leper Colony at Thirumani in the Chingleput District.

3. Roads—
   Cement Concrete—29-1 miles.
   Blacktop—506-5 miles.
   Waterbound Macadam—568-4 miles.
   Other unmetalled roads—717-3 miles.

Thus the mileage of motorable roads is 1,104-2 and that of all classes of roads in 1,821-5. In the matter of Railway communications there are 4·83 miles for every 100 square miles of country which is more than the presidency average of 4·19 miles. A special feature of this district is that the headquarters of all the taluks except Sriperumpudur are connected by railway.

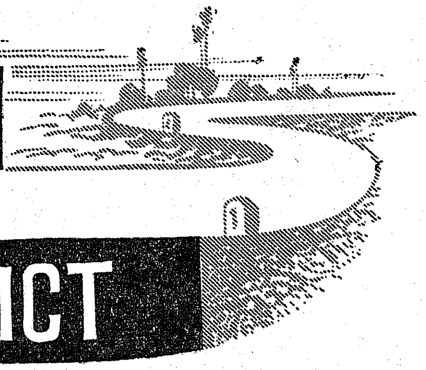
Canals.

The Buckingham Canal which is running along the coast for the entire length of the district and also through the Madras City is the main canal that connects the back waters behind the ridges of blown sand. Important back waters are the Pulicat lake in the north-east corner of the Ponneri taluk and the one at Covelong in north-east corner of Chingleput taluk.

Madras State Electricity Board

The Government have reappointed the following persons to be the Chairman and Members of the Madras State Electricity Board as indicated against their names till 30th June 1959 : Sri S. K. Chettur, I.C.S., Secretary to Government, Public Works Department—Chairman; Sri V. P. Appadurai, Chief Engineer, Madras State Electricity Board—Ex-officio Techninal Member; Sri T. A. Varghese, I.C.S., Secretary to Government, Finance Department—Ex-officio Member; and Sri T. K. Palaniappan, I.A.S., Director of Industries and Commerce—Ex-officio Member. Sri A. Balakrishnan, Accounts Member of the Board, has expressed his inability to serve on the Board beyond the 31st August 1958, and the posting of an Accounts Member will be announced later.

ROADS IN CHINGLEPUT DISTRICT



SRI K. V. EKAMBARAM, I.S.E., Chief Engineer (Highways), Madras.

Chingleput district is served by 0·602 mile of road per square mile as against the presidency average of 0·524 mile of road per square mile.

Prior to 1946, the major portion of the roads was maintained by the District Board Engineers and their staff under the control of district boards and some roads were looked after by the engineering staff working under the communication branch of the State Public Works Department. After the formation of the Highways Department in the year 1946, some of the district board roads were taken up by the Government and the mileage of roads now maintained by Government is nearly 711 and by the district board is 1,111. All these roads are being looked after by the engineering staff of the Highways Department. The length and classifications of roads now in charge of district board and Highways Department are as noted below :—

	Highways.	*District Board.*
National Highways ..	133–0	..
State Highways ..	..	..
Major district roads ..	577–6	15–2
Other district roads ..	..	279–0
Village roads	..	816–5
	710–6	1,110–7

The three National Highways which are looked after by the State Government but financed by the Government of India form the main arteries of the road communication system in the district. A short note on each of them is given below so that it will give an idea of the importance and growth of improved communications in the recent years.

Madras-Calcutta Road : N.H. No. 5.

This is known as Great Northern Trunk Road and its length lying within Chingleput district is 28 miles 3 furlongs excluding the portion lying within Madras City limits and maintained by the Corporation

Experimental improved surfacing was done in 1937–38 up to 12/0 with different types of asphalt products and cement concrete surface side by side. The asphalt surface has become too bad to be maintained economically and the entire stretch has now been cement concreted. It may be of interest to note that country cart traffic mostly responsible for destruction of the road surface has dwindled to a very great extent in the last ten years giving place to pneumatic tyred lorry traffic.

There are two bottlenecks on this road, viz., the bridges at miles 10/7 and 16/2-4. The former is capable of withstanding a load of 5½ tons only, while the latter a load of 10 tons. The bridge at mile 16/2-4 was temporarily improved during 1940–41 by dividing each 50 feet span into two by means of central piers, but the repairs were only of a temporary nature and the bridge requires to be reconstructed early. This has been proposed in the Second Five-Year Plan.

This is a road with longest lead for materials and hence very costly and difficult to maintain. Two miles of this road, viz., 31/0 to 33/0 run on high enbankment up to 20 feet high. The embankment is subjected to backwater action of Pulicat lake and it was a problem to maintain the embankment without erosions. Turfing did not thrive because the water down the embankment is saltish during most of the months. Cement concrete slabs have been tried now with a base coat of stabilised soil. But for slight settlement and disturbances of the slabs during heavy rains, the slopes have stood well.

Madras-Bombay Road : N.H. No. 4.

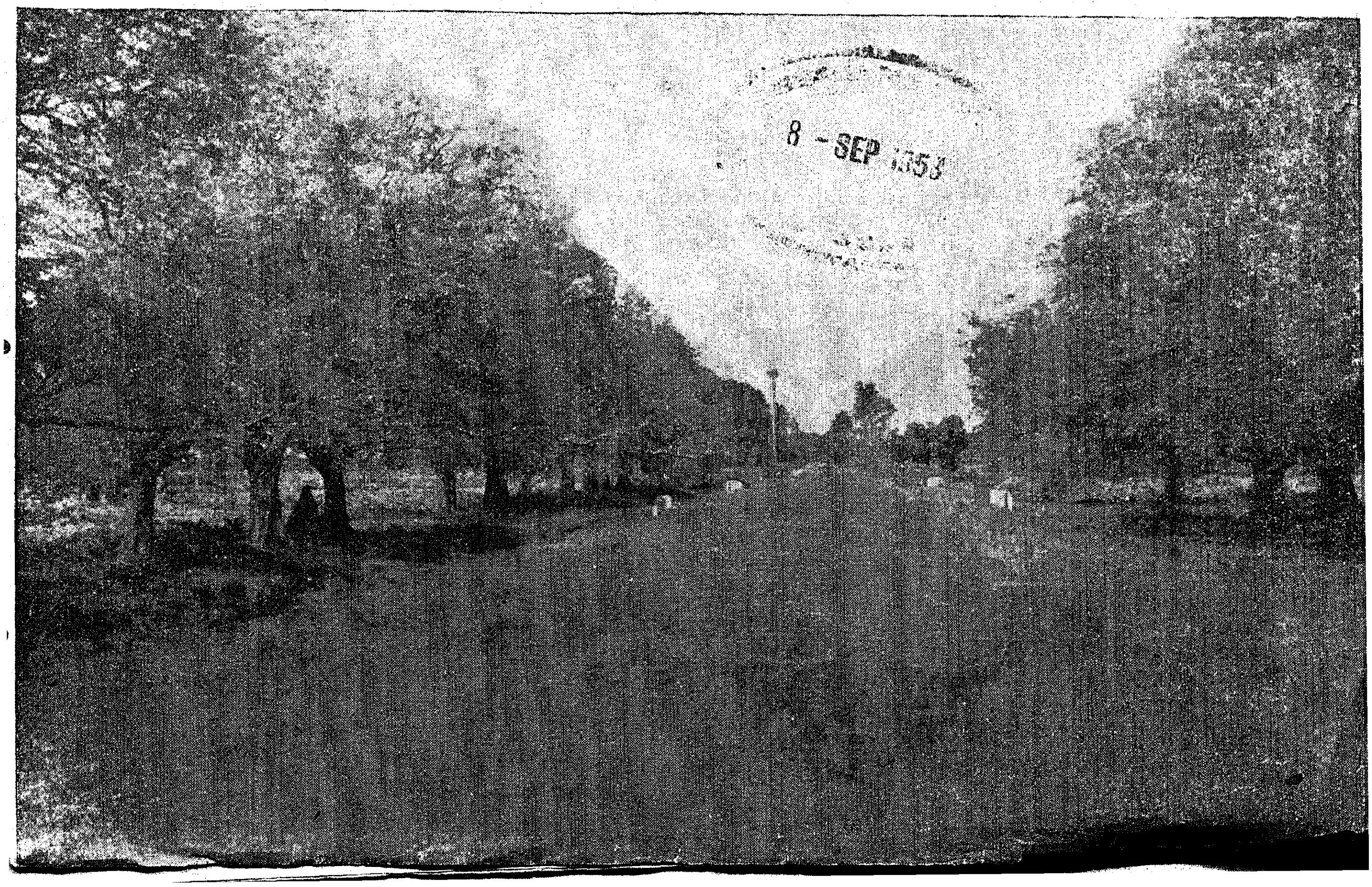
This is known as Great Western Trunk Road, its length lying within the district being 48 miles. This road has the heaviest traffic in the district mostly due to the presence of brick fields all along the road up to ten miles, supplying almost the entire requirements of the City of Madras. Besides, sand is also supplied from the Cooum river to the City in large

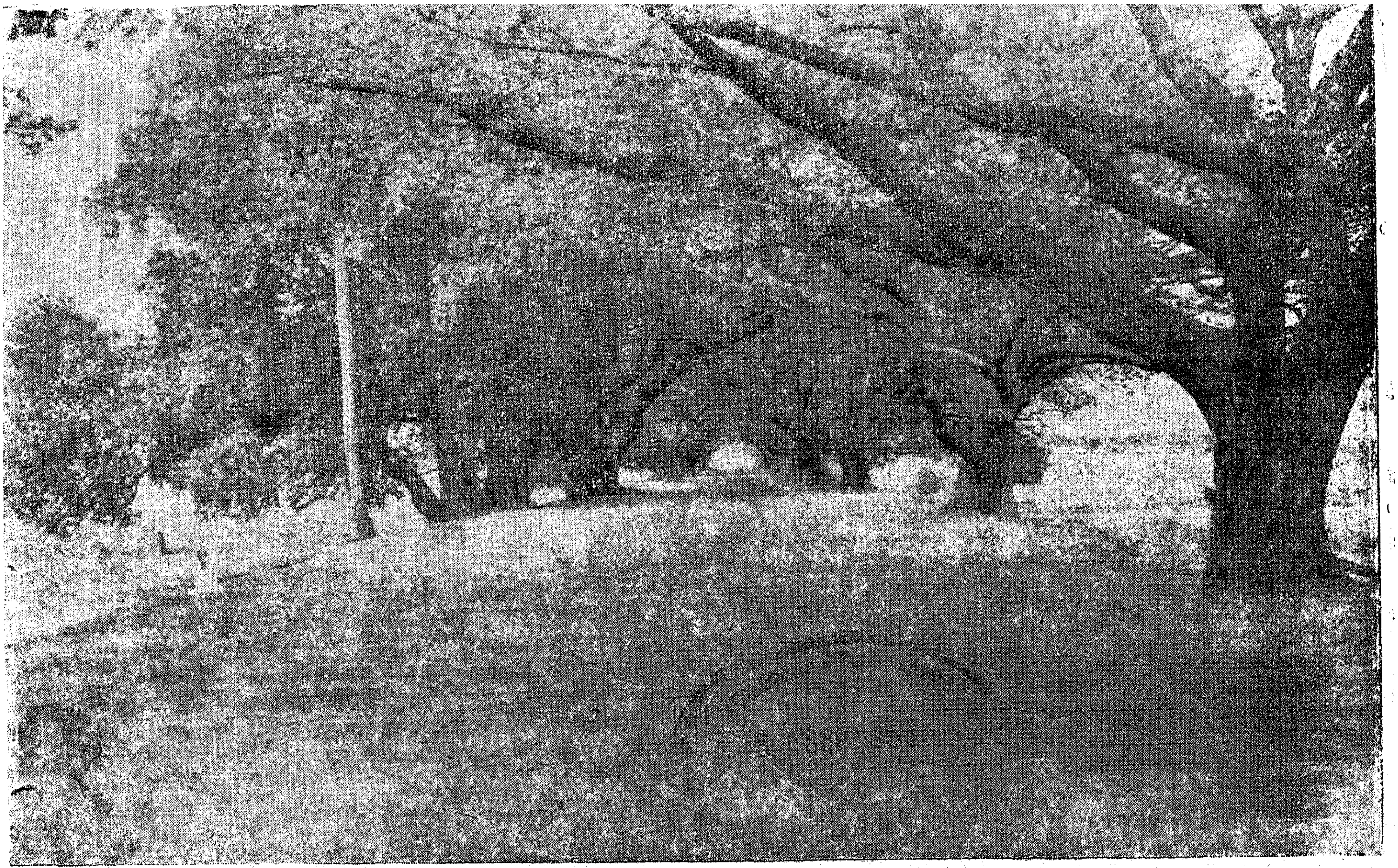
quantities through this road. Maintenance of this road in fair condition was a difficult problem for the then district board as even annual renewals with 3 inches metal failed to achieve satisfactory results. It was then decided to cement concrete the road as the only alternative and the work of laying cement concrete of different sections up to 14/0 was done in the thirties. The surface appeared quite good for about 10 years, but is now showing signs of grooving and cracking in some places up to mile 9/0. The cause of these cracks is being investigated. The reach from 14/0 to 15/3 was taken up in 1954–55 and completed in 1955–56. The remaining stretch up to 43/4 was surface dressed with hot asphalt in 1943–44 but it has to be converted into a cement concrete road up to 48/0 as early as possible according to the original P.W.R.D. proposal. The work of widening the blacktop surface to 22 feet has been completed. This road connects Madras City with Poonamallee and Sriperumbudur, passes very near Kancheepuram and then enters North Arcot district.

Madras-Tiruchirappalli-Dindigul Road : N.H. No. 47.

This road is known as Great Southern Trunk Road and 56 miles 6 furlongs of its length lie in the district. Experimental blacktop surfacing was laid on this road for the first time up to 13/3 in 1930–31. Different grades of materials of various companies were used and the road was maintained with " Secony " and " Colas " emulsions up to the year 1936–37 and thereafter with wearing coat with hot asphalt. The only furlong (9/1) of cement concrete was laid simultaneously and the furface has shown no appreciate sign of wear even now, thus demonstrating its economical superiority over all other types of surface. The blacktop surface was extended from 12/3 to 16/0 under maintenance grant in the year 1937–38 and 1938–39. In the year 1941 a special grant of Rs. 4 lakhs was allotted for the stretch beyond 16/0 and the length from 16/0 to 32/0 was converted into bitumen semi-grout surface in the year 1942. The blacktop surface of the road from 7/3 to 16/3 being unsuitable conphalt that is asphaltic carpet for the central 22 feet width with concrete sides 8 feet wide each has been laid for a width of 38 feet. The further length of the road except for a portion of about 1,000 feet within Chingleput Municipal limits is maintained as blackstopped surface and widening to 22 feet is in progress. This road starting from Madras City connects Chingleput and Madurantakam.

The State Highway in Chingleput district.





Another view of the State Highway in Chingleput district.

A perpetual source of nuisance much felt during the war time was the presence of an unbridged crossing across Palar in mile 38/3-5 of this road. A bridge was constructed at the above crossing and was opened for traffic in 1955-56. This bridge deserves a special mention in the history of road construction in Madras State as well as the whole of India since this is one of the world's langest pre-stressed concrete beam bridges and the first of its kind in India.

This road is heavily trafficked and much of the perishable articles such as plantains, etc., are brought to the City in lorries through this road. Besides widening of the road which is now in progress, bye-pass at Madurantakam is called for in the interests of safety.

The other important roads in the district are the M.D.Rs. of which 27 number have been taken over by the Government on the formation of the Highways Department in 1946. They are given a grant of Rs. 1,000 per mile per year for their maintenance. With this amount it is found very difficult to maintain these roads in a fair condition as the cost of materials and labour has gone up considerably in the recent years. Under this category there are only 27 miles of roads financed by the district board and they are of less importance.

Recently 5 miles 6 furlongs of roads within Kanjeepuram Municipality, a very big trading and pilgrim centre, were taken over by the department. All these roads are maintained as a blacktop. Cement concreting of municipal road in mile 0/0 to 0/6 is also completed.

The other district roads and village roads in the district are all in charge of the district board. In general the condition of all the metalled roads are tolerable while the unmetalled roads are in a very bad condition and only very few of them are passable in fair weather. The reason for the bad condition of the roads is mainly due to present day increase in volume of lorry traffic carrying important commodities from different parts of the district to the City of Madras, which in turn is due to railway wagon difficulties. It is also due to enormous increase in rates of materials and labour as compared with those prevalent before 1942 and the poor finances of the district board available to maintain these roads.

The surfacewar classification of roads for the district as existed on 31st March 1957 is as shown below :—

Cement concrete surfaced road	29-1
Blacktop surface road	506-5
Metalled road	568-4
Unmetalled road	717-3

The above figures will clearly reveal the improvement achieved in providing good riding surface to the roads and the milege of roads that still exist to be metalled to make them passable in all weather. There are also a few roads formed newly under the L.D. works, National Extension Service Schemes, etc., which will have to be improved.

The district has 1,937 villages and towns in which people are distributed as follows :—

(1) 906 villages having population of less than 500.

(2) 554 villages having population of less than 501 to 1,000.

(3) 316 villages having population of less than 1,001 to 2,000.

(4) 129 villages having population of less than 2,001 to 5,000.

(5) 17 villages having population of less than 5,001 to 10,000.

(6) 11 towns having population of less than 10,001 to 20,000.

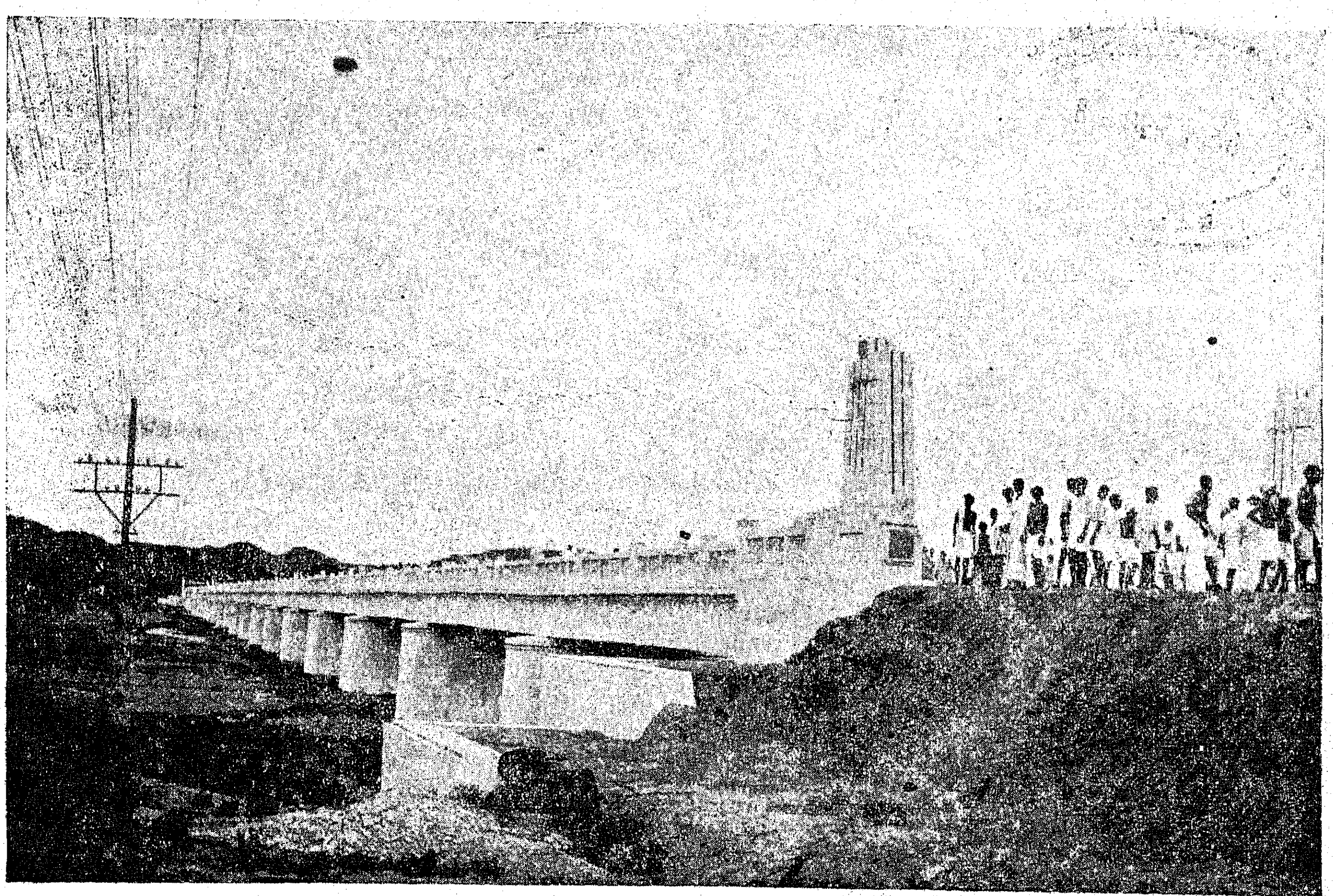
(7) Three towns having population of less than 20,001, to 50,000, viz., Saidapet, Sembiam and Chingleput.

(8) One town having population of more than 50,000 viz., Kanjeepuram.

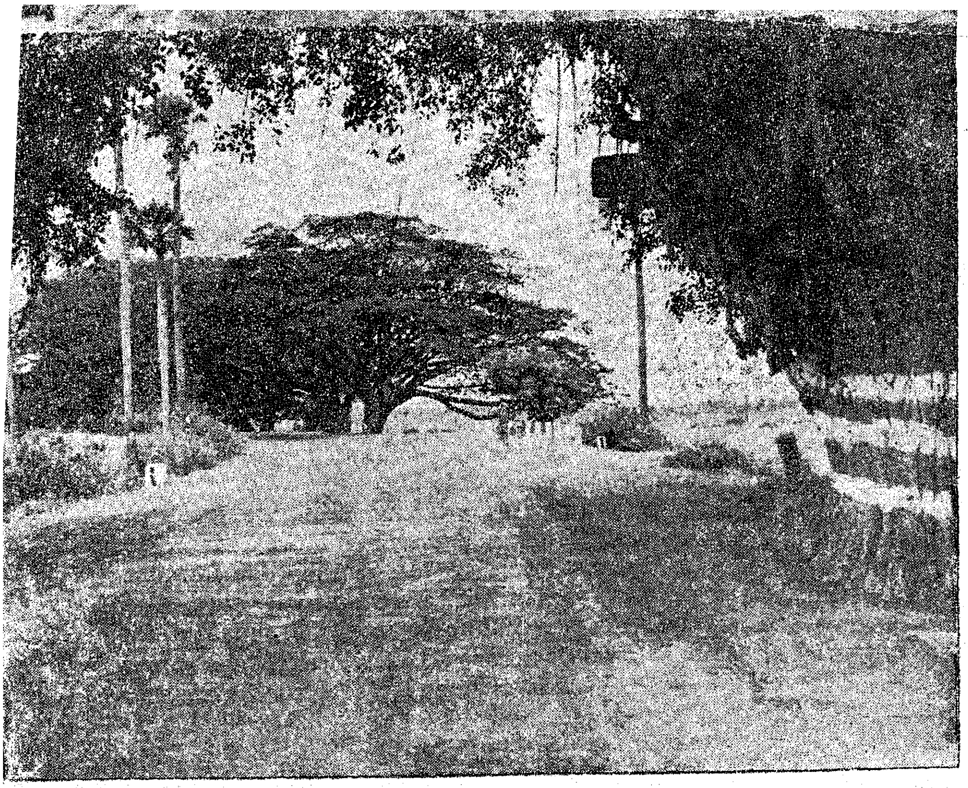
One hundred and seventy-one villages under class (2), 127 under class (3) and 63 under class (4) are at present being served by roads.

Nearly 75 per cent of the population of the district live in villages having a population of 5,000 and less. The density of population is 606 per square mile as per the census of 1951 which is above the average of the State of 579 per square mile. Under the P.W.R.D. Scheme the roads have been proposed such that for every village having a population of 500 and above adequate access is given to a main road. As this district is adjoining on all sides Madras City, where rapid developments are taking place in every direction more and better roads are warranted. Mr. Vipon's report proposed two schemes of road development for 12 miles 6 furlongs but both these have not been fully formed and metalled for want of funds. Thirteen bridges were also proposed, of which 11 had been completed and one is transferred to Corporation of Madras.

Under the P.W.R.D. Five-year Programme, 140 miles 4 furlongs of O.D.Rs. and 361 miles 2 furlongs of village roads are proposed for execution. When all the roads as per the project estimates had been laid, the district may be classified as one adequately served with roads.



Palar Bridge,



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A curve in the Highway in Chingleput district.

The following are the important M.D.Rs. connecting the various parts of the district with those of North Arcot, South Arcot, Chittoor and Nellore districts :—

1. Arkonam-Kancheepuram Road.
2. Kancheepuram-Wandiwash Road.
3. Cheyyar-Wandiwash Road.
4. South Arcot Frontier Road.
5. Abdullapuram-Moranam Road.
6. Madras-Tiruvallur-Tiruttani Road.
7. Kortalayar Bridge-Puttur Road.
8. Tada-Varadayyapalayam-Kalahasti Road.

The physical achievements for the district in road improvement during the First Five-Year Plan ending in March 1956 are as shown below :—

	Government roads.		*District board roads.*	
	Length.	*Cost in lakhs.*	*Length.*	*Cost in lakhs.*
Cement concrete	4–0	0·7	0–2	0·10
Blacktop	391–7	3·1	1–2	0·20
New metalling	..	..	65–9	0·90
New formation	5–0	2·3	290–0	3·30
New construction of bridges.	4 Nos.	4·4	1 No.	0·30
Other improvement schemes like repairs to minor bridges, culverts, widening roads, etc.	6 Nos.	2·6	2 Nos.	0·60

In continuation of the First Five-Year Plan, the Second Five-Year Plan was started in April 1956 and the target of allotment for each kind of road improvement and the physical targets that could be achieved at the end of the Second Five-Year Plan are as follows :—

	Government roads.		*District board roads.*	
	Length.	*Cost in lakhs.*	*Length.*	*Cost in lakhs.*
Cement concrete	..	..	..	..
Asphaltic concrete	..	..	..	..
Blacktop	7 2	1·02	11–6	1·09
Newmetalling	3–0	0·44	52–3	3·90
Improvements such as realigning, formation of bye-passes, widening, etc.	2 Nos.	2·00	..	..
Construction of minor bridges, culverts and causeways, improvements of all kinds including widening and strengthening.	5 Nos.	4·135	33 Nos.	5·35
Major bridges . ..	4 Nos.	9·10	3 Nos.	3·13
Formation of roads including acquisition.	..	..	157–3	5·88

In addition to all these, an amount of Rs. 16,000 for upgrading and other improvements to roads proposed to be taken over by Government from district board has also been provided.

The above figures do not include National Highways.

(*Continued on page* 33)

KANCHI—The City of Temples

" *Kanchi* " or Kancheepuram is one of the seven sacred cities of Bharat-Varsha (India). This place is known as " Perumal koil " to the Vaishnavites and is one of the three most sacred Vaishnavite sthalams, the other two being " Koil " (Srirangam) and Thirumalai " *Thirupathi* ". Kalidasa (1st century B.C.) refers to this city as the city *par excellence* and Sri *Vedantha Desika* (13th to 14th century A.D.) as the most important of the seven salvation bestowing cities.

Situated on the banks of the sacred river Vegavathi about 45 miles south-west of Madras, in the Chingleput district this ancient city of temples is easily reached by buses and trains in a couple of hours from Madras. Pilgrims from far and near pour in, in large numbers, daily to worship at the many important temples sacred to the Hindus of both the Vaishnavite and Saivite sects. Among the 108 sacred Vaishnavite Diviyadesams or places on the earth, 18 are located here and among the 1,008 Saivite kshethrams 108 are said to be found here.

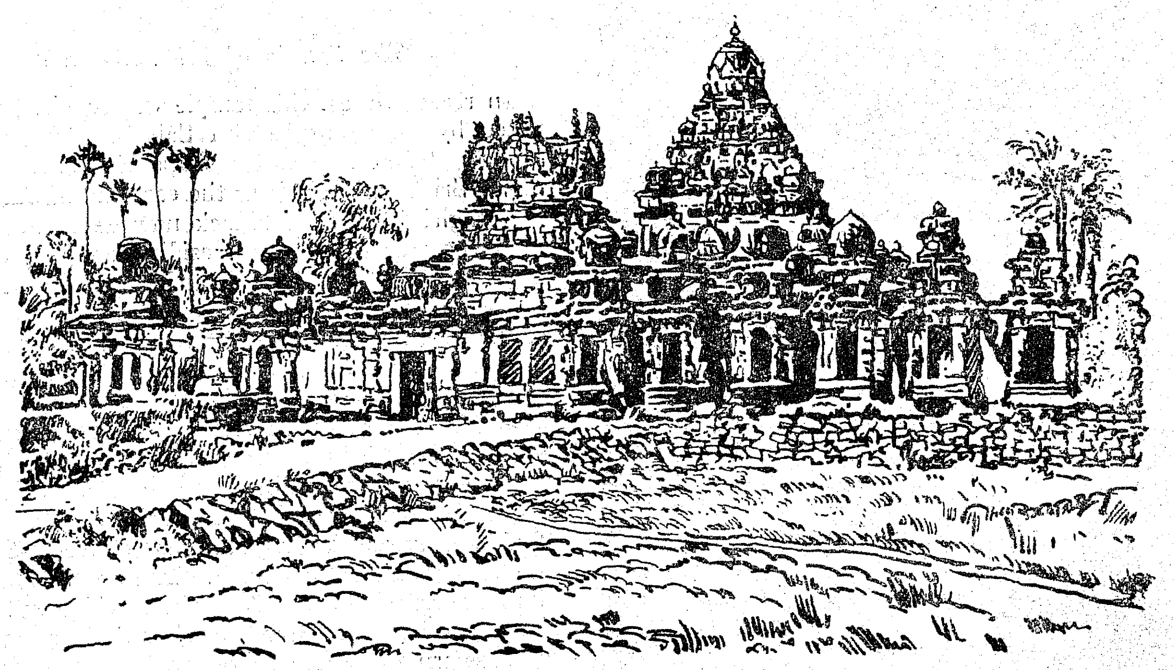
This premier city of temples has got an interesting record of political history apart from its religious importance, dating back to the days of Gauthama Buddah. This was the seat of capital for the Pallavas from the 3rd to 9th century A.D. The Cholas occupied it later till the 14th century A.D. when the Vijiyanagar kings established their supremacy over the southern part of India after vanquishing the Muslim rulers of the Bhamini dynasty. The Vijayanagar rulers held their sway over this part of the country till the 17th century A.D.

The Pallavas.

The Pallavas beautified this city with numerous pieces of architecture and sculpture. The claim of the Pallava supremacy was attained during the middle of the 7th century A.D., when the great Narasimha Varma Pallava who is otherwise called Maha Malla was reigning supreme here. History records his brilliant success over the equally great Pulikesin II, the Chalukyan Emperor at the battle of Pallur near Kanchi. This Puikesin was credited to have stemmed the progress of the great Harshavardhana in the north beyond the Vindiyas in the south. It was during Narasimha's time the famous *Kailasanathar Temple* at Kanchi and the beautiful stone architectures at Mahabalipuram were executed. His grandson Parameswaravarman constructed Sri Vaikuntaperumal temple here and it is therefore called Parameswara Vinnaharam.

Hiven-Tsang's visit to Kanchi.

The famous Chinese traveller Hiven-Tsang visited the courts of all these three great emperors, viz., Har-



Sri Kailasanathar Temple.

Madras Information.

Vol XII No 9
Sep. 1958

The Philosophy of Public Health

Dr. N. PARTHASARATHY, Director of Public Health.

We have had a century of vaccination; yet, small-pox is still prevalent in our country. We have had Acts and Laws, Codes and Regulations, framed, with the best of intentions of course, to enforce the maintenance of Public Health. Whereas we have succeeded in some measure in the provision of public amenities which have a bearing on the health of the people for example, public water-supply and public drainage, we have to bear in mind, that these projects have become acceptable to people not by way of their sanitary importance as because of their conveniance.

Being a nation traditionally and culturally accustomed to certain principles of personal hygiene such as daily baths, cleaning of homes, washing of apparel and so on and so forth—creditable as some of these habit-patterns are in relation to personal health—we have also acquired countless other habit-patterns, through generations, which are contrary to scientifically acceptable canons and codes of personal hygiene. Surprisingly enough, we seem to have been not so much concerned with community health though in several other walks of life the concern of the community has been quite evident, even in the distant past.

With such a back-ground heaving a decided pull at the progress of public health in our country, modernization, through latter centuries, has also had a say in the matter, setting in a certain amount of further deterioration in public health.

This philosophy of public amenities being accepted by the people more as physical conveniences than as sanitary measures, coupled with a variegated traditional and cultural pattern of life, have been largely responsible for the evolution of the Enforcement or Regulatory Phase of Public Health. However, the experience of the public health administrators throughout the world has proved time and again that

(*Continued on page* 27)

Uplift of Kanikkars

Kanikkars are the Hill-tribes living in the Kanyakumari district. The number about 2,500 and they live in groups of grass huts in about 40 settlements in the hills of this district, mostly around the Pechipparai Lake.

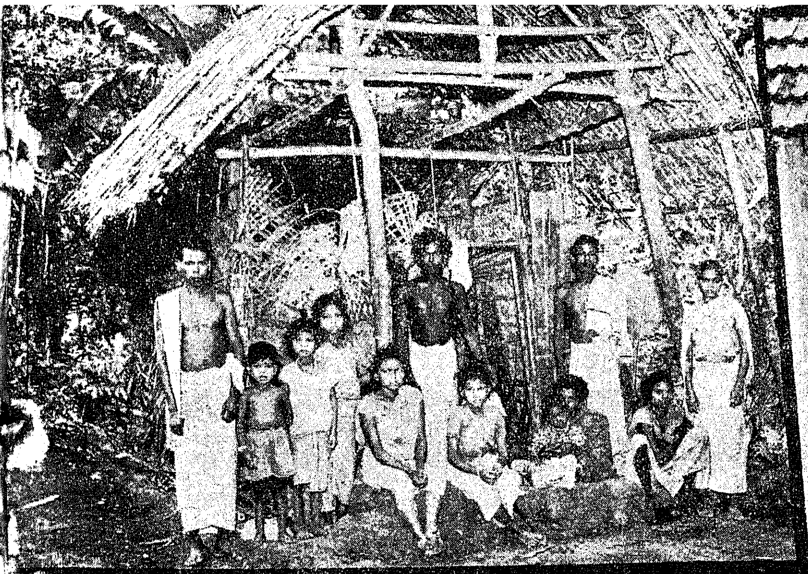
They are all illiterates except one or two and their dialect is a mixture of Tamil and Malayalam. They till the land in the forests and grow paddy, tapioca, plantations and other vegetables. They live mostly on tapioca and wild roots and rice and jack fruit. Every Sunday they bring their produce to the market across the lake, sell them to the people from the plains and buy their requirements. They practically spend all the money they get and save nothing.

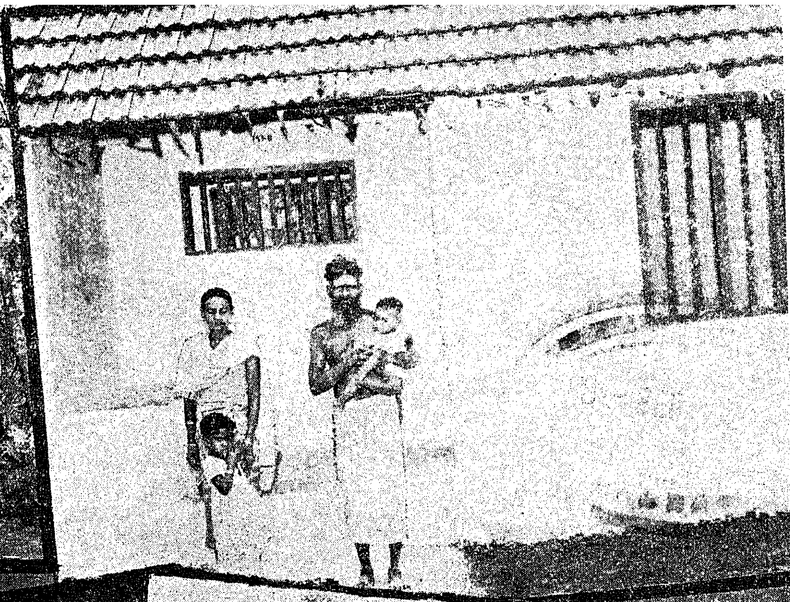
A minor welfare centre was opened recently at Pechipparai and the mobile medical van visits Pechipparai and Perinchani twice a week. A multi-purpose co-operative society was opened to help them sell their products and also to supply them with their requirements at a fair price. The society was also given a grant of Rs. 6,000, for issuing short-term loans to its members

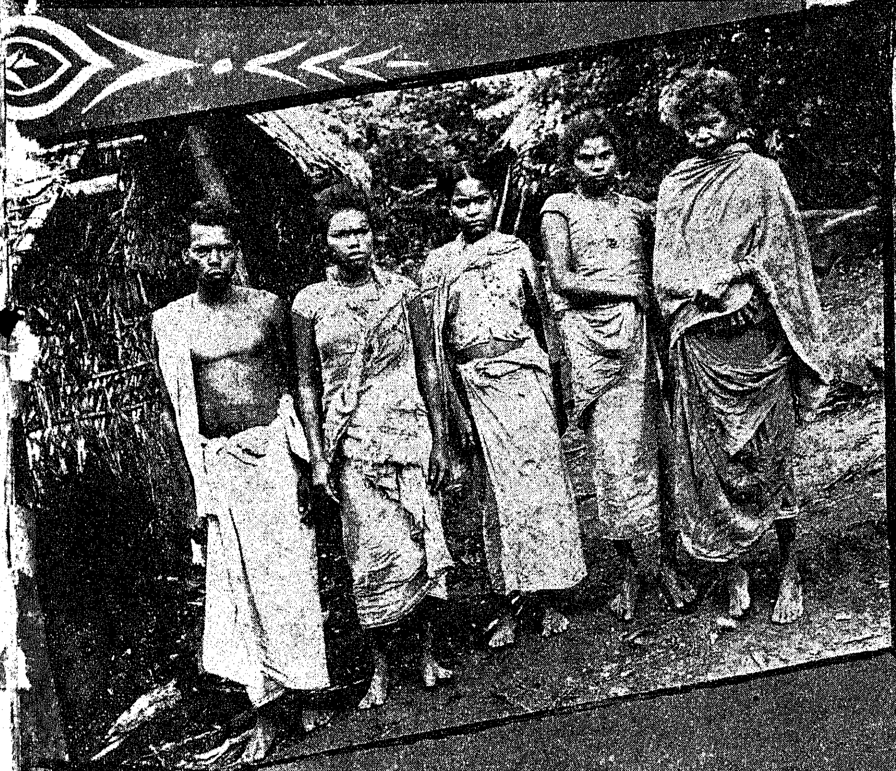
A school was established and about a hundred children are attending it now. An Industrial Training Institute was inaugurated in September 1957 by the Chief Minister. Twenty-five women and girls are receiving instructions in spinning, weaving and sewing.

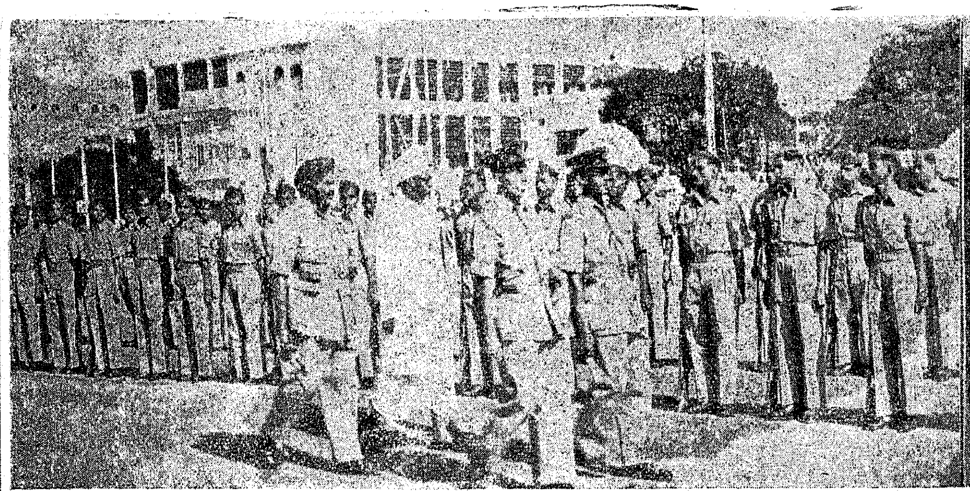
On the representation from the people that the attendance in the school will increase if it is made residential, a residential school was sanctioned and the Governor laid foundation stone for the school on 29th July 1958. Since the housing conditions of the Kanikkars were poor, a scheme to construct three colonies, one in Thirupparappu and another in Ponmani with 12 houses each and a third in Arumanalloor village with 6 houses. The 24 houses in the Thirupparappu and Ponmani villages have been completed and the Governor inaugurated the colonisation on 29th July 1958. The other 6 houses are under construction and another 28 houses are to be built shortly.

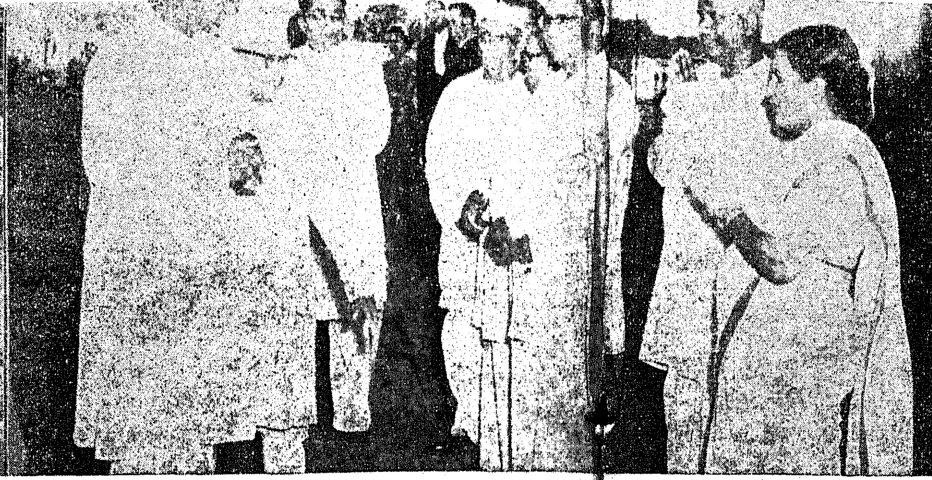
The photographs on the facing page show the Governor giving away the houses to the Kanikkars, their old dwellings and the present colony and some members of the tribe.



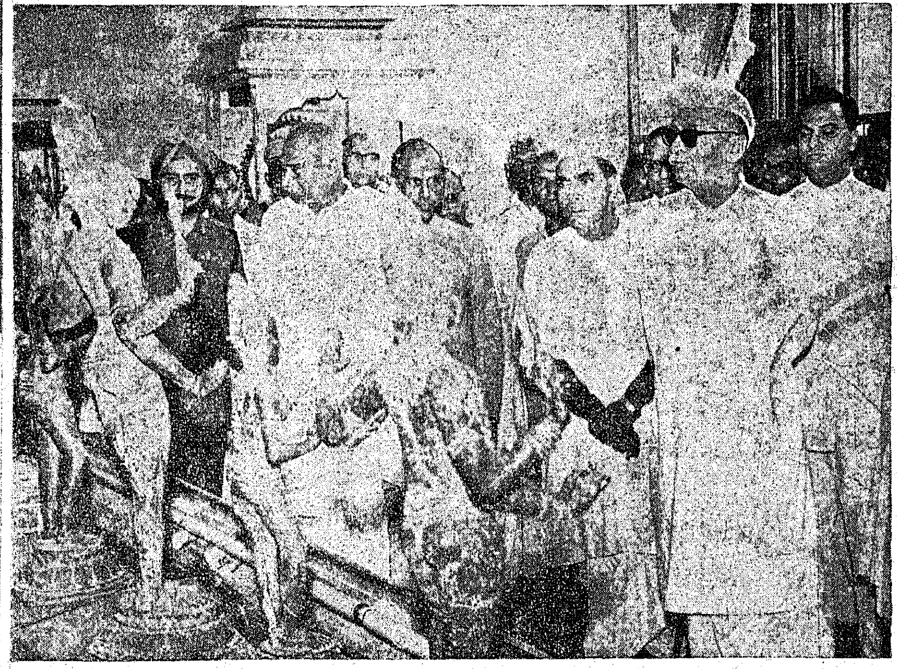


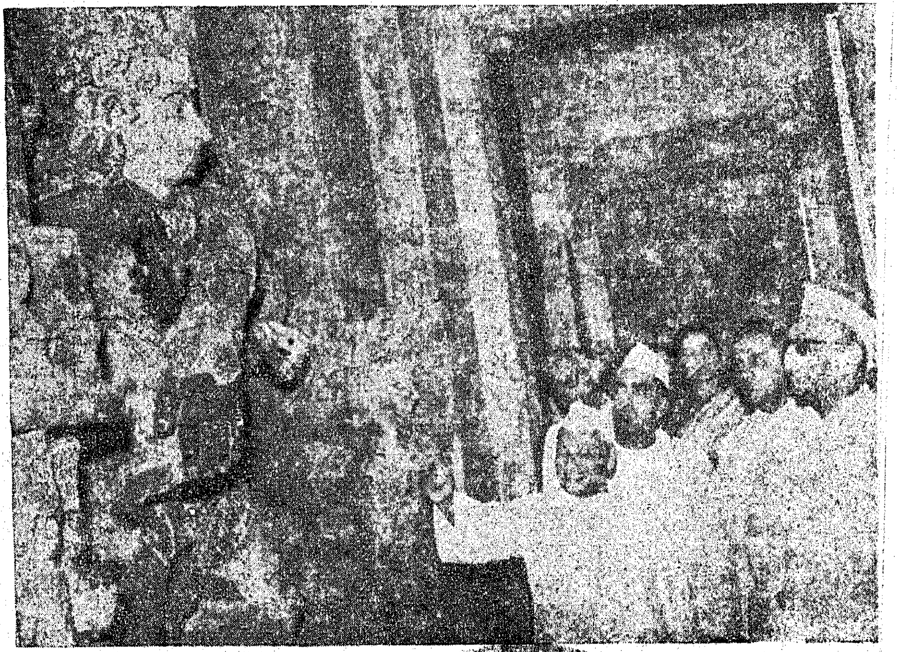


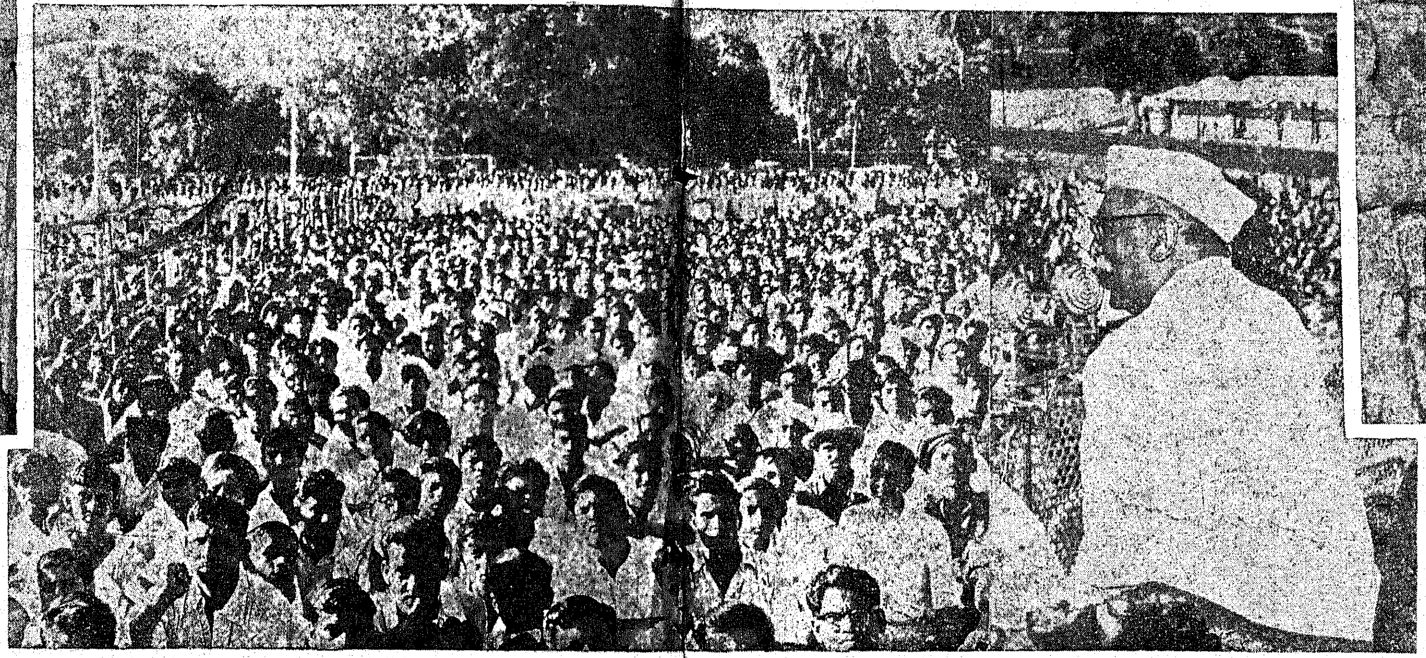


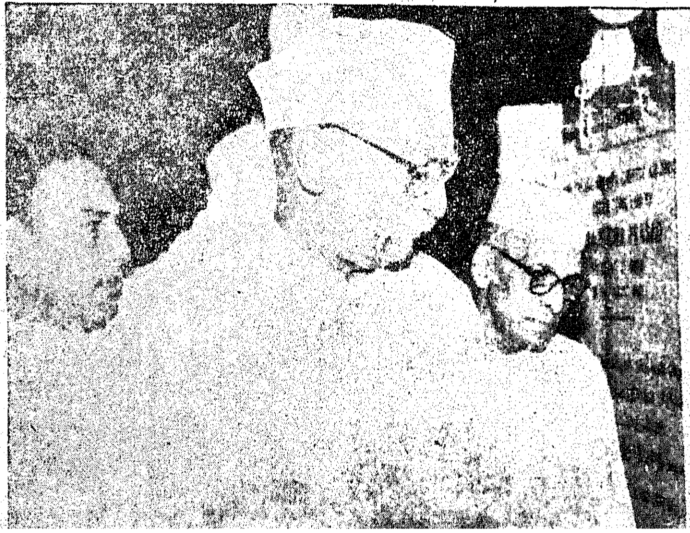


THE PRESIDENT IN TAMILNAD









8 - SEP 1958

The President, during his visit to the State last month, devoted his time almost exclusively to opening Colleges, College hostels and addressing College students in the City, in Tanjore and in Coimbatore.

In Tanjore, he visited the Art Gallery and spent many hours in rapt admiration of the art treasuers there, as seen in picture above.

The visit of the President has always been looked upon as a festive occasion in Madras State. In pictures above, he is seen responding in graceful dignity the greetings of the State's Ministers at the Railway Station on arrival, and relaxing in a jovial mood at the Garden Party given by the Governor of Madras, at Raj Bhavan.

9 - SEP 1958

A New Hostel for the Presidency College Girl Students

With the inauguration of the new Hostel for the women students of the Presidency College and the University of Madras by the President, Dr. Rajendra Prasad on August 8th, over a long-felt-need has been fulfilled.

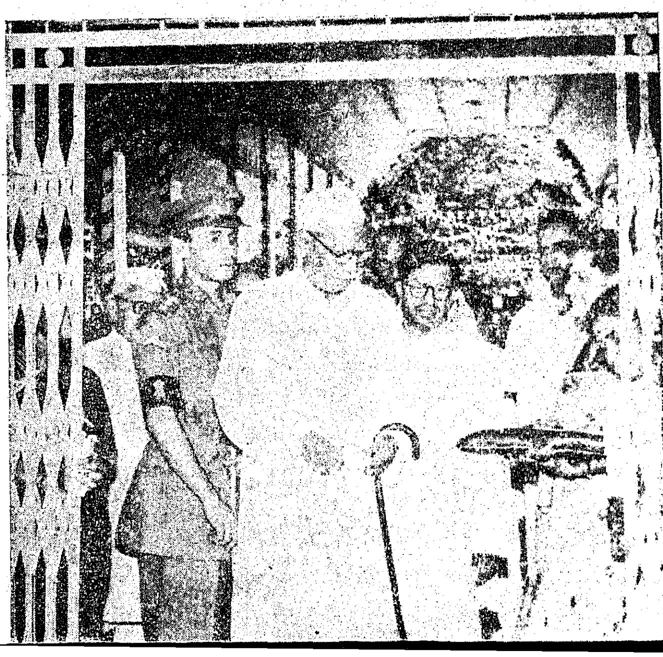
The Presidency College, which was started in 1840 became a co-educational institution only in 1889. The present sanctioned strength of women students is 325. For a long time the girl students of the Presidency College had suffered for want of hostel facilities and were at the mercy of hostels attached to other Colleges. It was only in 1944–45 a small hostel was opened for the girls of this College at " Narayan Castle ". As the strength of girl students increased in the College, it became necessary to build a better and bigger hostel for them. The choice of a site was not easy and ultimately the Chief Minister consented to give the present site.

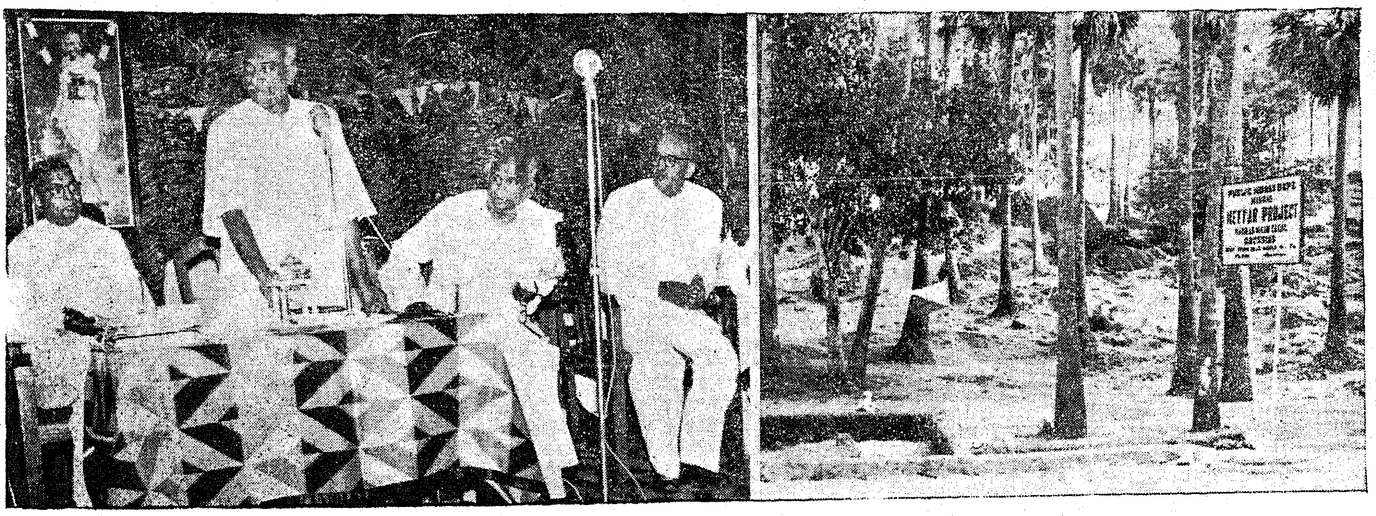
This hostel which is situated very near the State Guest House inside the Government Estate costs Rs. 11 lakhs and can accommodate 200 students. It is modelled like a triangular shaped aircraft with sweeping wings, the entrance being located at the nose. The well furnished living rooms are in the wings while the central body houses a spacious hall. The Madras University has donated Rs. 75,000 towards the construction with the stipulation that reservation of accommodation for thirty women students of the University should be made and a wing or block in the hostel should be named after a former Director of Public Instruction, Sir Meveril Statham, and a wing has been named accordingly.

The President arriving to inaugurate the Hoste.l

The new hostel for the women students of the Presidency College and the Madras University was declared open by the President on 8th August.

The Hostel.





Work on the Neyyar Project in the Kanyakumari District was inaugurated by Sri K. Kamaraj on 29th July 1958 at Kaliakkavilai.

The Neyyar Project

The excavation work of the left bank canal of the Neyyar Project was inaugurated on 27th July 1958 by the Chief Minister at Kaliakkavilai in the Kanyakumari district.

The Neyyar Project comprises construction of a gravity masonry dam across the Neyyar river in Kerala State at a place called Chempilamodu, about 19 miles south-east of Tiruvandrum. The water thus impounded will be utilized for irrigation of 34,100 acres by means of two channels, one on either side. The right side channel, 21 miles long, will irrigate an area of 15,000 acres lying entirely in Kerala State. The left side channel, 24 miles long, will irrigate 19,100 acres lying partly in Kerala and partly in Madras State limits.

The first stage of the project comprising the construction of the dam and the right side channel have been completed at an estimated cost of Rs. 143 lakhs. The second stage comprising the construction of the left side channel system at a cost of Rs. 105 lakhs is progammed to be taken during the Second Five-Year Plan period. This channel up to 24th mile runs in Kerala State and thereafter in Madras State. The actual area that will be benefited in Madras State is about 10,000 acres in Vilavancode taluk of Kanyakumari district.

The channels and disribution system lying in each State will be excavated by the respective State. Including the proportionate cost of dam and headworks provided by Kerala State, the Madras share of cost of irrigating the 10,000 acres in their limits is about Rs. 92·28 lakhs.

The channels in Madras State are being realigned and redesigned to suit the boundary limits and the revision of designs made by the Kerala State and the work will be taken up shortly for execution. Preliminaries such as forming roads, construction of buildings, etc., are however already in progress. A sum of Rs. 5·00 lakhs is programmed to be spent during the current year.

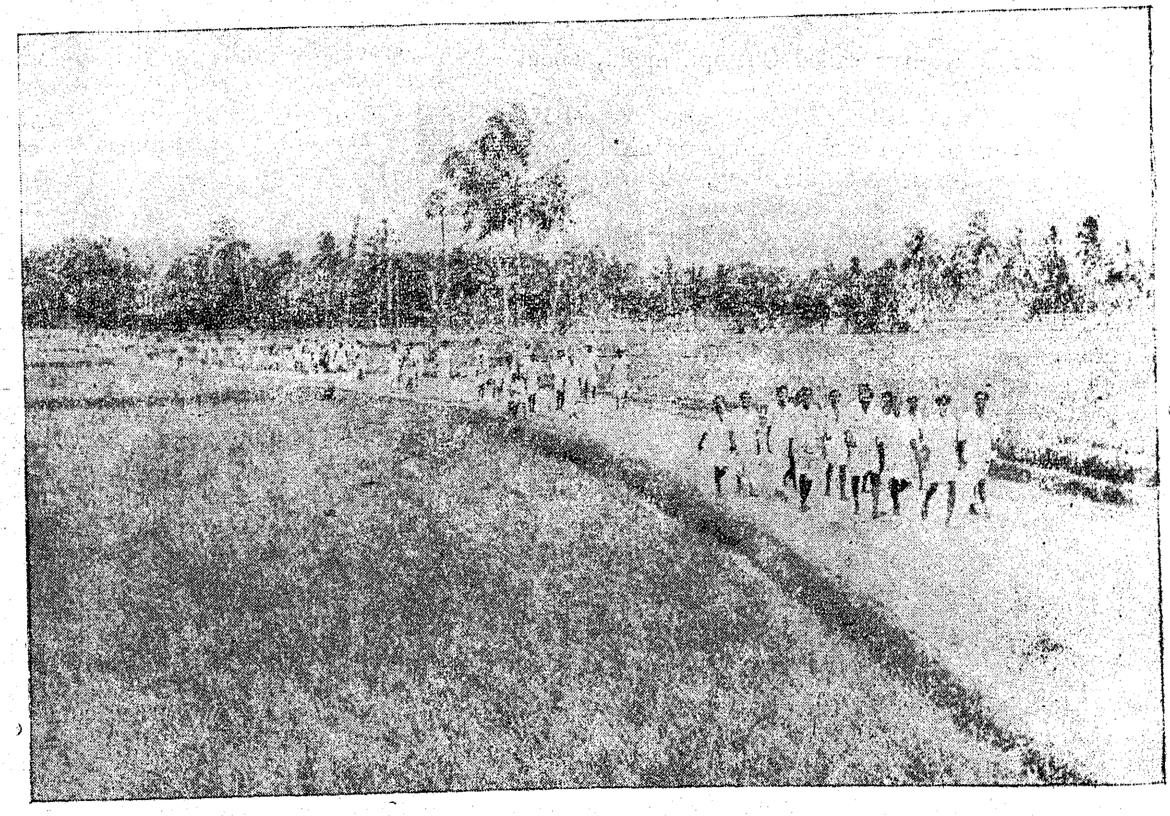
The Valliyoor Conference

The Pilot Project Co-ordination Conference of the Valliyoor Block was inaugurated on the 25th July by the Education Minister Sri C. Subramaniam at Valliyoor in the Tirunelveli district. People came forward to donate buildings, equipment materials and library books and the total assistance offered came to the extent of Rs. 1,27,000 including the assistance given by the N.E.S. authorities. Hard cash amounting to Rs. 28,000 was handed to the Finance Minister on the spot.

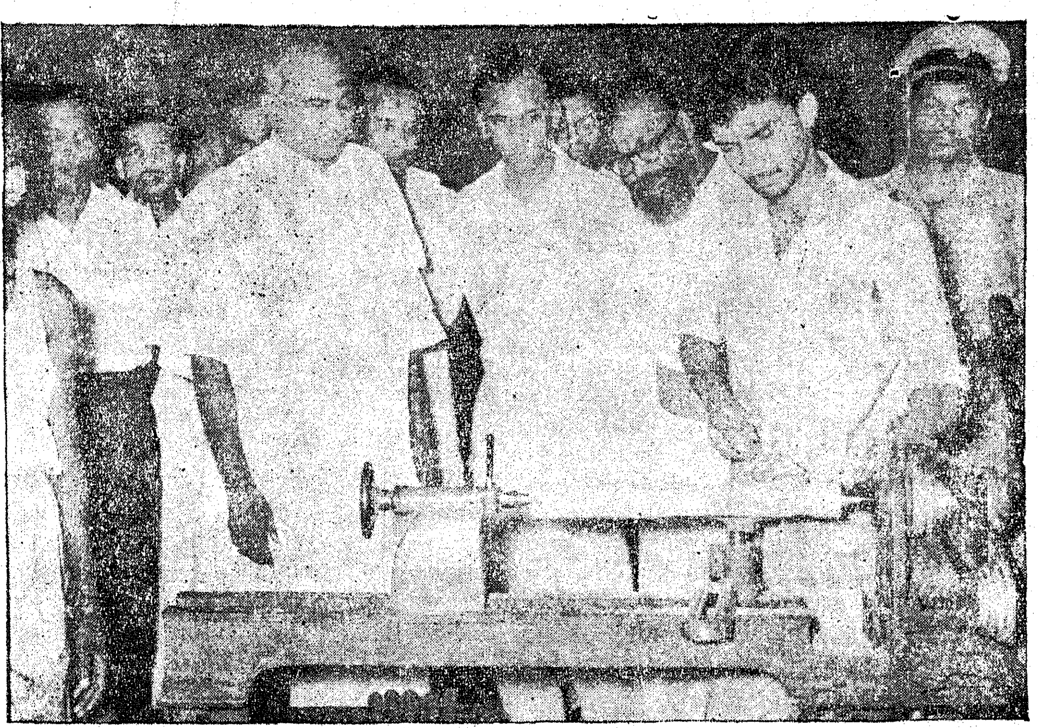
One special feature of the schemes undertaken for improvement of Education in this Block is the organization of supervised study classes in the nights for day-scholars who are slow learners and who have no facilities at home for study. This has been undertaken in as many as 21 Higher Elementary Schools.

The Governor, Sri Bishnuram Medhi, declared open the Konengadu Road in Kanyakumari district on 29th July.

FACETS OF DEVELOPMENT IN

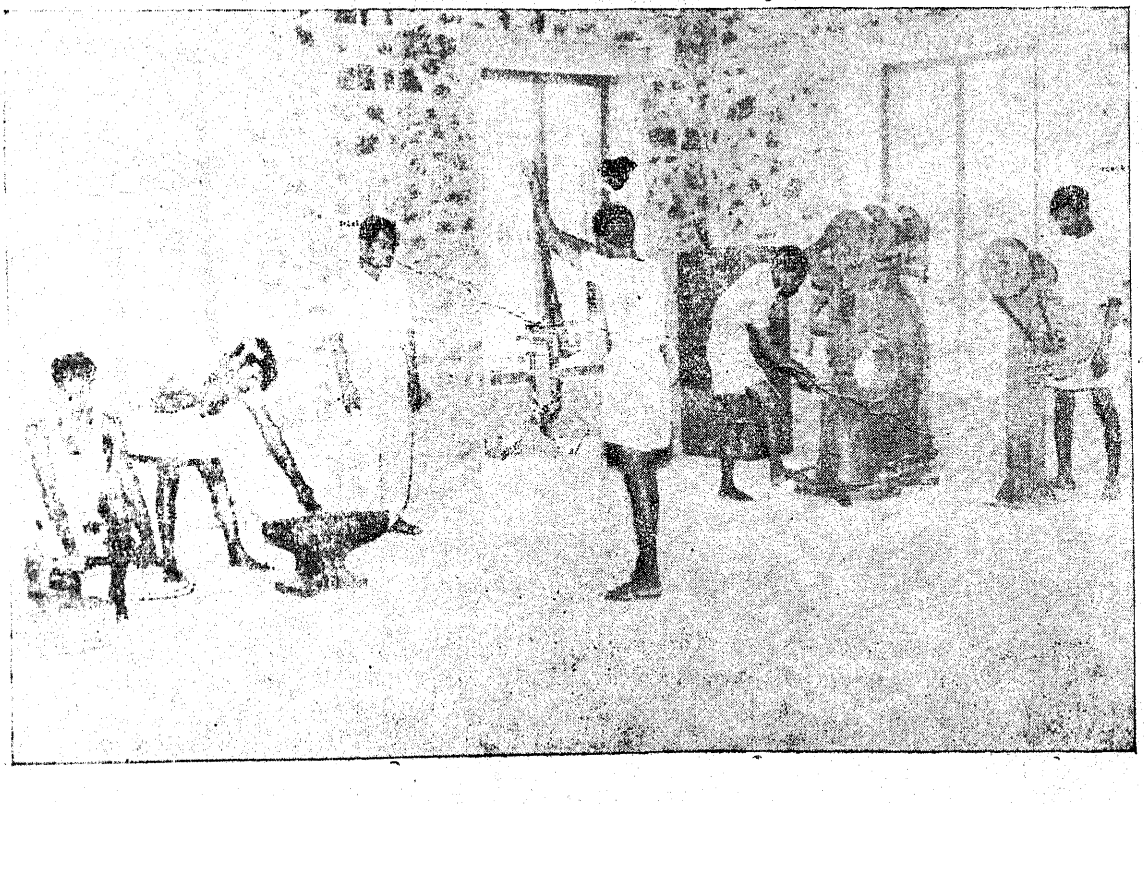


The first-users of the Konengadu Road step briskly.



The Chief Minister, Sri. K. Kamaraj, inaugurated a Blacksmithy and Carpentry Centre at Azhagappapuram in the Kanyakumari district on 25th July.

KANYAKUMARI DISTRICT

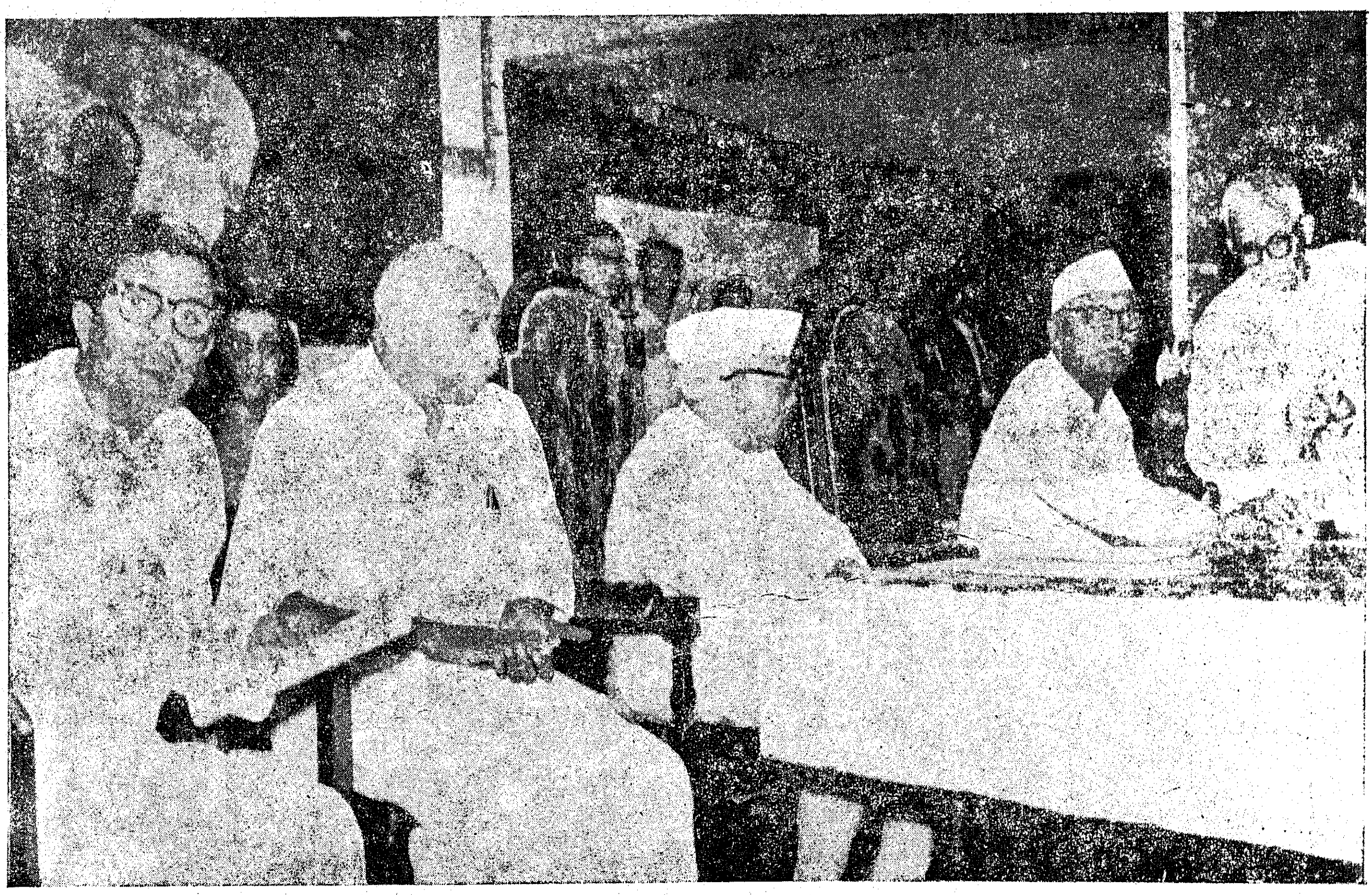


The Blacksmithy Section of the Azhagappapuram Centre.

Agricultural Education and Research in Madras State

The idea of improving Indian agriculture is just over a hundred years old. In 1856, the East India Company started the first steps in this direction to avoid the calamities of frequent famines in India. In 1868 a " model farm " was started at Saidapet with the aim of building up a class of men to carry out farming on modern lines. Later, the Saidapet centre was found inadequate and so an Agricultural College and Research Institute was started at Coimbatore in 1907. Subsequently a separate " Freeman Building " for the College was opened in 1926. In 1921 the course was affiliated to the University of Madras and upgraded as a degree course of Bachelor of Science in Agriculture. The laboratories in the Freeman Building were designed to accommodate only 48 students, but with successive increases in the number of students admitted to the College, culminating in 162 per year at present, yet another building, namely, the " Golden Jubilee " block, had to be built. This building is nearing completion and is expected to be ready by the end of 1958. Besides the B.Sc. (Ag.) degree course, the College was having a Diploma Course in Horticulture until 1957. In addition, short-term courses to farmers in special aspects of Agriculture are also being given.

Starting from very small beginnings, with just three divisions for Agriculture, Economic, Botany and Chemistry, the Institute has now developed into one of the largest in India, with fullfledged sections and specialities in no less than 16 subjects relating to agriculture. The foundations laid by the early workers, the traditions and standards set up by such eminent



The President pressing button to unveil the plaque marking the laying of the foundation stone of the Regional Post-Graduate Institute of Agriculture at Coimbatore on 10th August 1958.

Kendal Medal Winner.

Sri Govindasamy, P.C. No. 619 of North Arcot District, has been awarded the Kendal Humanity Medal for displaying courage beyond the call of his duty in saving the life of Sri M. K. Kuppusamy Ayyar, a teacher, when the latter was being swept away in the strong current of River Naganathi on 6th November 1956 in Kannamangalam.

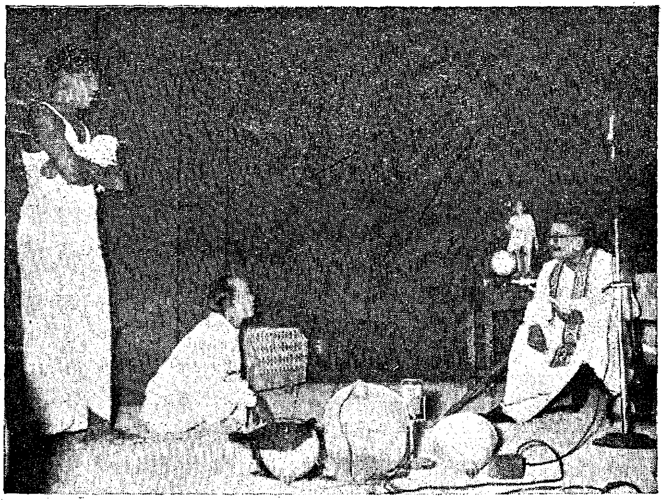
Progress of Plan Schemes

The State Development Committee reviewed the Progress of the Schemes under the Second Five-Year Plan for the quarter ending June 1958 and recommended increased allotments for Irrigation, Minor Irrigation and Power Development Schemes. The Committee met in the Cabinet Room, Secretariat on 1st and 2nd September 1958.

The Vaigai Project, it was reported to the Committee, may commence storing water from October this year, so that the impounded waters could be made available for generating electricity under the second stage of Periyar Hydro-Electric Scheme which is to be commissioned by the first week of November.

In view of the persistent shortage of steel, the Committee urged that there should be an examination of all building programmes under the Second Five-Year Plan Schemes in order to make a broad classification of constructions which could be implemented without the use of steel and those which must employ steel. The Committee desired a quick decision on this, so that orders could be issued for proceeding with some of the building programmes without using steel.

The programme of desilting-cum-reclamation of tanks which was introduced in Chingleput district has been recommended to be extended to the districts of Ramanathapuram, North Arcot and South Arcot and the Pudukkottai division. A suggestion to hand over the river pumping units in the State to user co-operatives was recommended for consideration at the departmental level.



A scene from the drama staged on the occasion of the Five-Year Plan Publicity Week at Vellore.

Plan Publicity at Vellore

To bring home to the people that Freedom and Progress go hand-in-hand, Five-Year Development Plan was celebrated in Vellore for three days beginning on the Independence Day.

A largely-attended public meeting was held at Rajagopal Nilayam, Sri T. M. Bhaskara Thondaiman, Collector, presiding. Sri P. S. Rajagopal Naidu, M.P., welcomed the gathering. Sri S. V. Chitti Babu, Principal, Government Training College, Vellore, Sri Radhakrishna Reddiar, District Agricultural Officer, and Sri Narayanaswamy, Assistant Director of Industries, explained the targets and achievements of the Plan. Sri Sithapathi, Municipal Chairman, Vellore, proposed a vote of thanks.

On the following day a drama 'On the Banks of Palar', depicting the prosperity the Plan would bring to the people was staged, Sri T. M. Bhaskara Thondaiman, the Collector, playing an important role. Sri M. A. Manickavelu, Minister for Revenue, presided and distributed medals to the participants in the drama.

Five-Year Plan Publicity Exhibition conducted at the Co-operative Central Bank Grounds was attended by thousands of people daily. Film shows explaining various facts of the Plan were arranged at the Grounds by the District Publicity Officer, Chingleput, on all the three days.

Nursing and PUBLIC HEALTH

Miss E. H. GILLESPIE.

To care for the sick is the time-honoured task of the nurse. But the modern nurse, while not neglecting her responsibilities for beside care, realizes that much of the illness seen is preventable if proper information can reach the people. At the Government - General Hospital in Madras, the nurses in training are being encouraged to do health teaching as part of their work. The Indian Government with the assistance of World Health Organization, has set up an experimental project in introducing public health nursing in the basic training of nurses to determine the best methods of integrating the preventive side of medicine and simple teaching methods in the preparation of the nurse. Nagpur, Cuttack, and the Government General Hospital, Madras, have been chosen for WHO aid in this respect. In Madras, in international WHO nurse has been appointed to assist the public health nursing tutor, and special teaching aids and equipment have been given. Certain other equipment, such as model bags for visiting nurses, has been supplied by UNICEF.

This new influence in hospital nursing care may best be illustrated by the story of a patient's stay in hospital :

" Perumal lay flat on his back on the stretcher, waiting to be admitted to the hospital. He gazed with unseeing eyes at the uninteresting ceiling for his mind was a jumble of white-clad figures, visions of knives and fierce looking doctors, memory of piercing pains from the previous night at home with his mother bending anxiously over him. Fear made an uncomfortable knot in his stomach, scarcely distinguishable from the pain of his illness. Then there was a nurse smiling at him and saying that in a minute his bed would be ready and in a few days he would be feeling much better. She explained to Perumal that he would first be bathed and changed from his own clothes to the hospital garments and then he must stay quietly in bed. She told him whom to call for any of his needs and why he must not get up and walk to the latrine or to get a drink of water. Knowing what was expected of him, relieved a great deal of the boy's fear. With the nurse's friendly reassurance, the ward and all the people did not look so strange, and after his bath and clean clothing, he sleepily said good-bye to his father and drifted off to sleep.

In the days that followed, there were some unpleasant times, for being sick is seldom a happy occasion, but he learned to appreciate the clean bed, the daily baths and the care to his hair, his mouth, his feet and scarcely realized that each time the nurse really gave him a little health lesson about looking after himself, explaining to him such things as how dirt allowed to collect under long fingernails permitted germs to get into his food when he ate and that sickness was caused by these little things. When he felt more like talking, the nurse started asking him questions about his home : where did they get their water, what kind of a well did they use, was it near the latrines. He wondered why she wanted to know until she explained how many illnesses including the one which he had caught, were caused by bad water—water that was bad because of germs, not because it tasted queer. When Perumal's father came, she asked him too about the well and when she found out that the water ran back into it from the ground around it, and that other people were sick there too, she said she would notify the Corporation to inspect it, but in the meantime to make sure that all the water was boiled at home and to tell the other people to do the same.

Another time she watched Perumal eating his meal and saw that he would not eat ragi, saying that he liked only rice, so she explaind how the ragi gave extra strength and helped to build good bones and encouraged him to eat some. The day his mother came, the nurse talked to her about adding ragi to the family diet and showed her how it was a good food value for the little money it cost. She also explained that Perumal would feel weak for some time after his illness and would specially need good food and even if she could not afford to buy the more expensive forms, there were lentils and pulses to add to the diet.

When the great day came when Perumal could leave the hospital, the nurse took a few moments from her busy day to talk to Perumal and his mother and father who had both come for him. She reminded

the daily baths and the care to his hair, his mouth, them of all the things she had talked to them about in the previous days: what had caused Perumal's illness and how it could have been prevented and how to keep from ever having it again, good health habits, how to improve the family diet without adding much to the cost, and above all that a hospital is not a place in which to die but to be cured and to learn how to stay well. Perumal was given a bottle of tonic to take home with him but more important than that was the invisible medicine he took: the health teaching the nurse had given him, good practical advice which he and his family could follow now and which would become the basis for good health habits all the rest of his life."

Perumal is of course an imaginary person, or rather a composite of many patients at the Government General Hospital. But it is now going to be possible to have more and more patients going home with this invisible aid to restoration of their health and protection from other health hazards so that they will remember the hospital as a place where they learned about health as well as were cured of their diseases.

The programme in Madras has been in operation since October 1957, so that the first year students have had certain changes made in their studies and are already applying their knowledge of hygiene and sanitation to teaching their patients on the wards. The teaching programme in the School of Nursing has been broadened to put more emphasis on prevention of illness and healthful living. In addition to classes, the students need a wider experience than is gained inside the hospital; so observation visits are made to various community health agencies and they will later have some experience in seeing health care in the homes of the community. A Bedford van, seating 10 pupils, has been provided by the WHO for this purpose and is in use.

It is to be hoped too, that this introduction to public health nursing will convince nurses of the value of preventive work, so that they will be interested in becoming fully qualified public health nurses which are so badly needed for rural development plans and all kinds of health programmes.

(Continued on page 25)

All works connected with the distributaries have been completed except for the drops which are in progress. The area targetted during 1957-58 is 4,000 acres. But due to unfavourable monsoon and low storage in the reservoir supply has been given to 2,700 acres so far and out of this 2,500 acres are reported to have been brought under cultivation before 31st March 1958.

New Kattalai High Level Canal Scheme.

The canal will run on the right side of the Cauvery from above the Kattalai Bed Regulator. The total length of the canal will be 86 miles. It will irrigate 8,622 acres of dry lands directly under the main canals and 12,000 acres under the existing tanks, of which 8,723 acres are wet lands. The targetted area for the Second Plan period is 12,000 acres. The scheme was inaugurated in August 1957.

Canal excavation is in progress in about 35 reaches in the first section of 40 miles with an average labour strength of 2,400 per day. Thirty-seven bridges and 28 cross-masonry works have been taken up and work on this is in full swing. Two bridges have been completed.

Pullambadi Canal Scheme.

This scheme is to excavate a canal on the left side of the Cauvery from above the Upper Anicut. On completion, it will irrigate 22,114 acres of which 8,831 acres will be direct and 13,283 acres under tanks. The targetted area to be benefited under the Second Plan period is 15,000 acres. This scheme was also inaugurated in August 1957 and canal excavation is in progress in about 40 reaches in the first section of 25 miles with an average labour strength of 1,800 per day. Fourteen cross masonry works and six bridges are in progress. Formation of tanks is in progress in ten places.

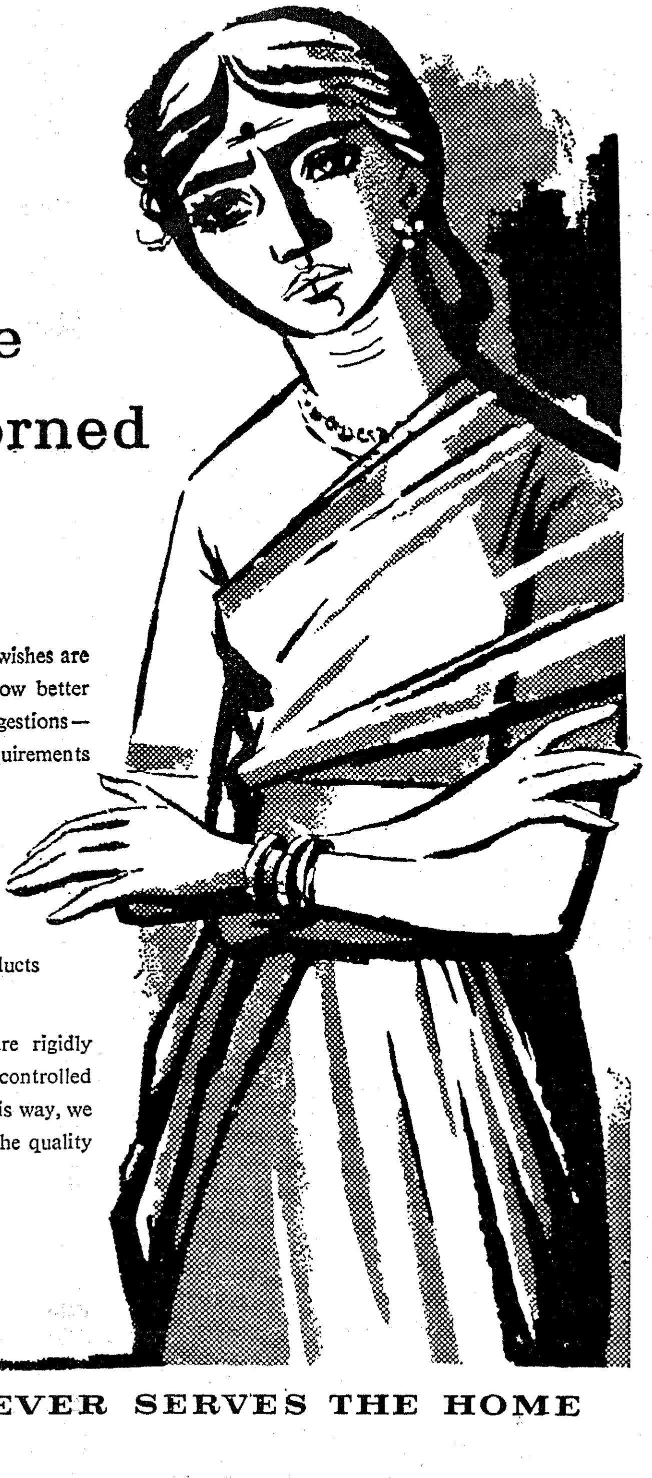
Vidur Reservoir Project.

This project consists of the construction of a reservoir across the Varahanadhi river near Vidur in South Arcot District. It will irrigate an extent of about 3,200 acres, of which 1,000 acres lie in Pondicherry. The scheme has been administratively approved and a sum of Rs. 2·00 lakhs was proposed in the Revised Estimate for 1957-58. A division was sanctioned for this project and the division has been formed from 1st January 1958. The construction of the buildings both temporary and permanent has been taken up and are nearing completion. Formation of the approach road and the formation of the bund for the earth dam on the right flank are in good progress. The excavation of foundation in masonry dam is in progress and 400 units of earthwork have been done during March 1958, including removal of rock.

Neyyar II Stage.

This project relating to Kanyakumari District was originally investigated by the Construction Engineer, Trivandrum. It is now being investigated in detail by the special staff of this Government. About 3,300 acres of wet ayacut and 6,700 acres of new area in Madras State are expected to be benefited by this Scheme.

. . . no fury like a woman scorned



Just a simple housewife . . . yet her wishes are of prime importance to us. We know better than to scorn her opinions, ideas, suggestions — for she knows best the needs and requirements of the home.

To find out *just what she wants,* we carry out marketing research surveys all over the country. Thus, it is the housewife who sets many of the standards that Hindustan Lever products must measure up to.

To ensure that these standards are rigidly maintained, quality is checked and controlled at every stage of manufacture. In this way, we are able to supply your home with the quality products that you need.

HINDUSTAN LEVER SERVES THE HOME

HLL. 15-X52

erosion of soil in their own primitive way by breaking the long hill slopes into number of strips and by forming terraces with outward slopes and in some places by constructing stone retaining walls at very heavy cost. These measures have neither been effective nor economical as the terraces with outward slopes were still causing erosion of soil and applied fertilizers and the construction of stone retaining walls involved collection of stones and construction of high and wide walls at great cost.

How the State Government tackles the problem.

The urgent need to arrest both the depleting fertility of the lands put under erosion permitting crops and the rapid silt accretion into the reservoirs constructed across the various rivers for which the entire Nilgiris district forms a watershed—caused by wrong land use and faulty cultural practices—was recognized by the Madras Government which set up a Soil Conservation Engineering Branch of the Agriculture Department to solve the problem as early as 1951. The functions of this establishment were to assess the nature and extent of erosion from the different fields, to recommend the appropriate land use depending upon the land capability, to formulate proposals for preventing soil erosion by mechanical erosion control measures, to implement the soil conservation measures and maintain them for a period of two years after their completion and to advise the land owners to adopt suitable soil conserving follow up practices.

The survey and preparation of plans and estimates for the soil conservation works were commenced in an independent sub-catchment of 90 acres in Ketty Valley—the most intensively cultivated valley in the Nilgiris—during 1951 and the execution of the works was commenced during 1952 and completed during 1954. The Soil Conservation works were later extended to an adjoining catchment contiguous to the first one and thereon to other vulnerable areas in the district. So far, out of over 20,000 acres of potato cultivated lands, a total area of only about 2,500 acres could be protected with soil conservation measures.

For purposes of proper land use planning, the different types of lands in the Nilgiris have been divided into five classes detailed below, mainly based on their slope groups and the degree of erosion in them. The Soil Conservation measures executed in the different classes of the lands are also furnished below :

Land capability classes for the Nilgiris.

Land use suitability (Broad grouping).	*Land use capability classes.*	*Land characteristics.*	*Soil conservation measures executed.*
Agricultural lands.	Class I ..	Slope up to 2 per cent uneroded or slightly eroded with good soil conditions.	Crop rotation (2 or 3 years) including improved farming and contour farming.
Do.	Class II ..	Slope from 2 to 10 per cent moderately eroded with soil conditions fair to good.	Graded type contour bunding or American type channel terracing with outlets and disposal drains contour farming rotational cultivation, strip cropping, etc.
Do.	Class III ..	Slope from 10 to 16 per cent uneroded, moderately or highly eroded with soil conditions fair to good.	Contour and graded trenching with disposal drains and drop pits and all agronomical soil conservation measures.
Do.	Class IV ..	Slope 16 to 33 per cent uneroded, moderately or highly eroded with soil conditions fair to good and with deep sub-soil.	Bench terracing at 4 to 6 feet vertical interval with disposal drains and drop pits other agronomical soil conservation measures.
Forests or/and grass land.	Class V ..	Slope over 33 per cent—very badly eroded land with soil and other conditions poor.	Contour or graded trenching with disposal drains and drop pits contour planting and application of suitable manures if necessary and other conservation practices.

In lands under class IV proposed to be raised with plantation crops like tea, coffee, cardamom, etc., contour trenching at 10 feet vertical interval with disposal drains and in lands under class IV already planted with plantation crops without undertaking adequate soil conservation measures, staggered trenching in between the plants are the works executed.

(To be concluded)

In the Service of Small Industrialists

The current emphasis on the development of Rural India has brought a new phase in the programme of modernisation of the widely dispersed industries of which Carpentry and Blacksmithy form two of the important industries. The tools that a rural carpenter or a blacksmith in our country is using have remained unchanged for hundreds of years. These have limited the quality of his work as also the economy of his production.

Improvements in machinery and tools have made it possible to manufacture articles in wood or metal cheaply and with an accuracy previously unattainable. If the rural artisan is to function as an important link in the service of rural community in the context of their ever increasing needs in the modern age and as one contributing to rural economy, it is very necessary that the carpenter and the blacksmith should become familiar with the capabilities of small machines and the fundamental principles underlying each operation.

With a view to improve the technical knowledge as well as the economic condition of the carpenters and blacksmiths, the State Government have, with the financial assistance from the Government of India sanctioned the establishment of three fully equipped carpentry and blacksmithy workshops with Mobile Vans, of which one was inaugurated at Mannargudi on August 18th by our Chief Minister. This departmental centre has been set up at a total cost of Rs. 4·83 lakhs with a provision to train 35 artisans who will be paid a monthly stipend of Rs. 30 each.

These Rural Carpenters who will undergo training at this Workshop, under the experienced carpenters and a Demonstrator, would not only learn the use of improved tools but also learn the improved methods of production by labour-saving methods. This one year training at this Workshop would easily catch the interest and imagination of these artisans who would be attracted to get their job works, like repairs to agricultural implements, hand and bullock-carts and building requisites like doors and windows done at this workshop. With the increasing standards of living

(*Continued on page* 14)

(*Continued from page* 6)

will attract a lot of visitors. The entire Project will be completed and brought under full beneficial use early. I have no doubt that this Project will considerably enhance the welfare of the country, particularly the people of this area.

I have to mention an interesting feature noticed during the construction of the bridge. As the name of Anamalais indicated there were a number of elephants roaming about the place and most of them were going along the Pungan Odai to drink water from the Amaravathi Reservoir. When the works were in progress and when the centering for the main bridge was in position, it was feared that these elephants might play franks and thus disturb the centering put up across the odai. But, they did not do so and wisely kept out of the way perhaps they knew that some important work was going on.

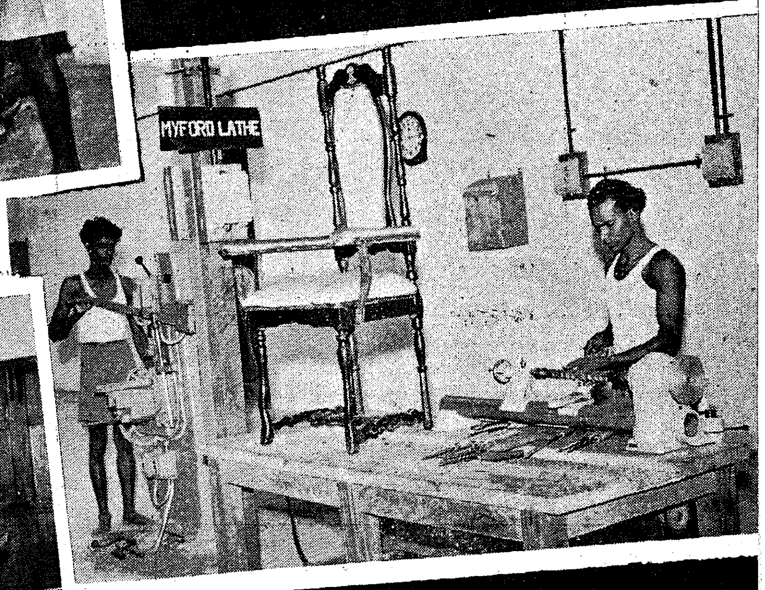
Amaravathi Project gives relief only to small portions of Udumalpet and Dharapuram taluks; still there are large tracts in these taluks which are subject to periodical famines. To bring relief to all these vast areas, it is proposed to divert water from Parambikulam river, which at present flows west to Arabian sea without any use. To give effect to this Project, permission from Kerala Government is necessary. I hope ere long that this permission will come forth and the execution of this Project will be taken up early for the benefit of these parts.

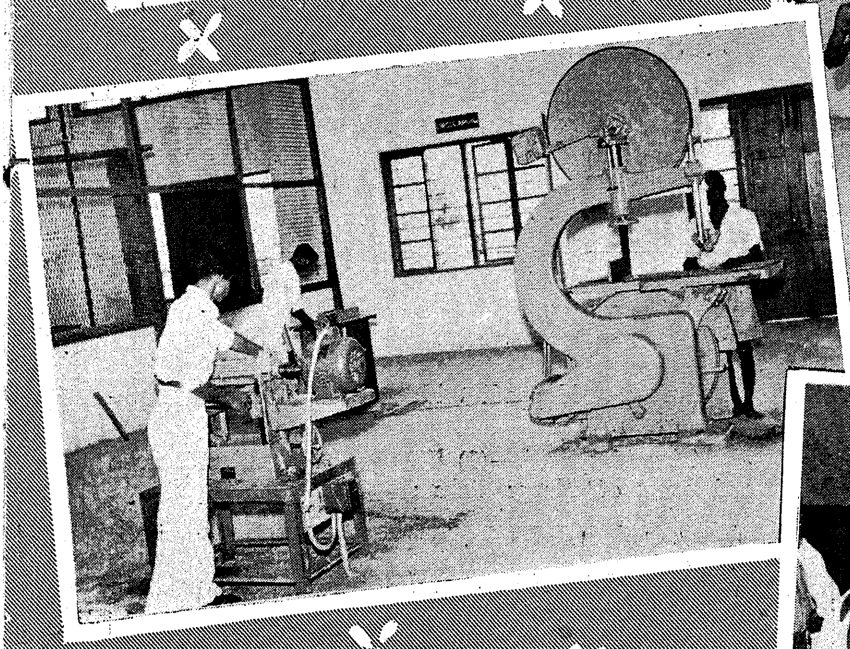
Reorganization of Industrial Co-operatives

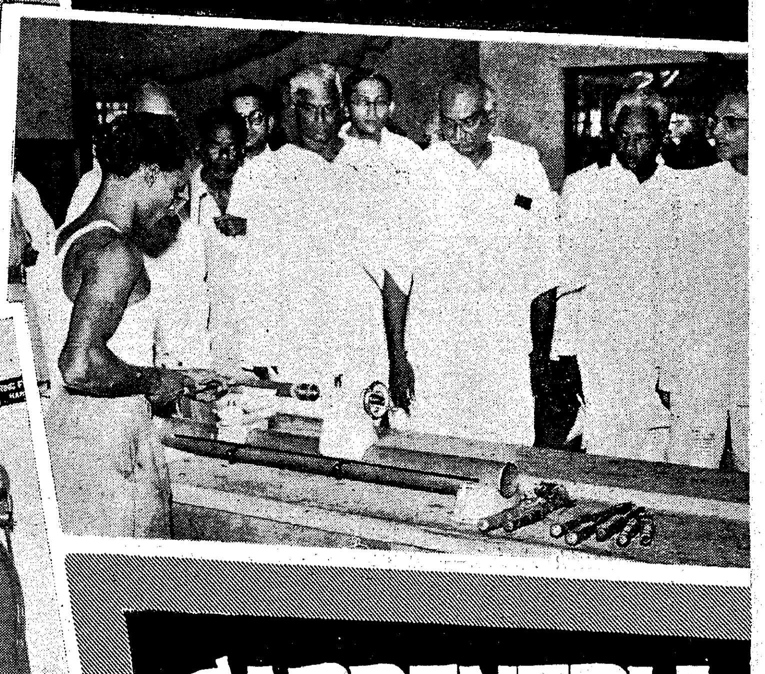
The Government have sanctioned a loan of rupees one lakh for the reorganization of the Kamatchiamman Metal Workers' Co-operative Society, Limited, Tirunelveli, in order to provide adequate working capital and make efficient arrangements in the matter of procurement of raw materials, control of production work and marketing of goods, etc. The scheme is estimated to involve a non-recurring expenditure of Rs. 14,000 on land and buildings and a recurring expenditure of Rs. 2,200 on staff besides a sum of Rs. 95,000 required as working capital representing three months' requirements of raw materials. A sum of Rs. 9,000 will be collected as share capital from the members of the Society.

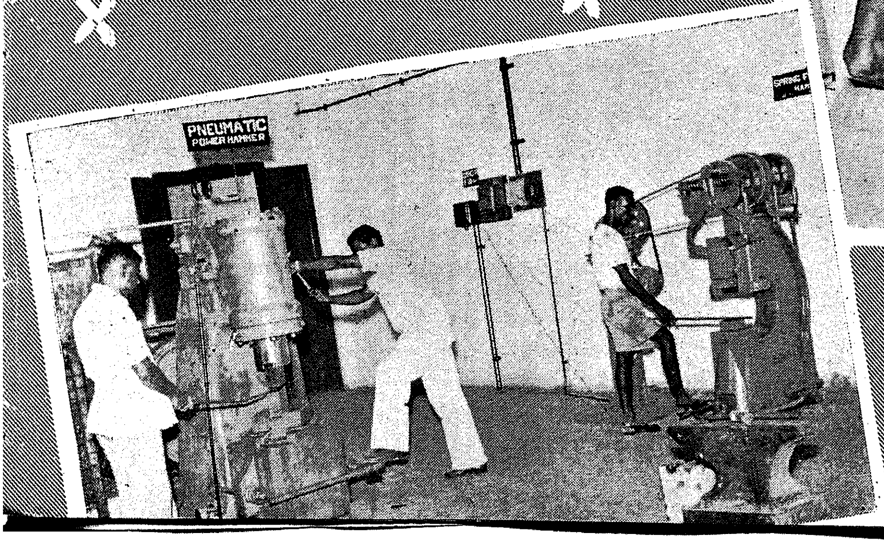
Another loan of Rs. 70,900 has been sanctioned for the reorganization of the Manamadurai Metal Workers' Co-operative Society. A sum of Rs. 6,600 will be collected from the members of this Society.

BLACKSMITHY *and*









CARPENTRY CENTRE

(*Continued from page* 12)

in villages and semi-urban areas, there is every possibility of increase in demands for the carpentry goods like cots, doors and windows and simple types of furniture. Consequently, there is bound to be an increasing scope for the artisans to give more output by such improved tools and implements, and thereby increase their daily earnings.

The main purpose of the two mobile workshops, one for carpentry and another for blacksmithy, is to give demonstrations to village artisans near their doors in the use of handling modern machines, improved tools and power-driven machinery, educate them in the modern methods of production and techniques and thereby attract them to adopt such methods and techniques in their own workshops.

Brassware unit.

In the programme drawn up for the development of Small Scale Industries during the Second Plan period, the establishment of departmental service centres for certain selected industries concentrated in particular places is an important one. These service centres are intended to undertake operations involving costly machines which small units cannot afford to purchase, supply raw materials and cut components at reasonable cost, and introduce new and remunerative lines of manufacture. One such service centre has now been set up at Kumbakonam at a total cost of Rs. 7·83 lakhs for the benefit of about 400 families engaged in Brassware and allied industries. This centre was inaugurated on August 18th at Kumbakonam by the Chief Minister, Shri K. Kamaraj. The Brassware Industry at Kumbakonam needs considerable guidance and encouragement to develop the productive activities, especially when the industry has received a serious setback due to competition from stainless steel manufacturers and also due to the high cost of production. The Service Centre has been equipped with modern machineries such as deep drawing presses, shearing machines, folding and bending machines, die casting machine, heat treatment furnace, automatic lathe, etc., with the help of which it is not only possible to improve the quality and lower the cost of the articles now produced by most units but also take up new lines of manufacture such as water taps, stoves, etc.

It will be of interest for the small industrialists to know that as a measure of assistance, the State Government have, with the concurrence of the Union Government, agreed to charge the small units, only the cost of materials, contingencies, labour and supervisory staff towards the servicing made, without interest on capital and depreciation. Technical advice will be given free of cost.

Ten More N.E.S. Blocks

The Government of India have allotted to this State for the year 1959–60, ten N.E.S. Blocks with the suggestion that pre-extension work in Agriculture may be taken up immediately in these blocks.

In view of the renewed emphasis on agricultural production, each block allottable from April 1959, is required to have had a one-year period of pre-extension activity exclusively in the field of agriculture.

The State Government have decided that the pre-extension work in agriculture shall be implemented with immediate effect in the ten blocks enumerated below :—

North Arcot.—(1) Wallajah (Wallajah firka and a portion of Ranipet firka in Wallajah taluk); (2) Sholingur (Sholingur firka and a portion of Ranipet firka in Wallajah taluk); and (3) Kaveripakkam (Kaveripakkam and Paranji firkas in Arkonam taluk).

South Arcot.—Kanai [Kanai firka and Kanjanur (part) in Villupuram taluk].

Chingleput.—Kunnathur (Kunnathur firka and part of Poonamallee firka in Sriperumbudur taluk).

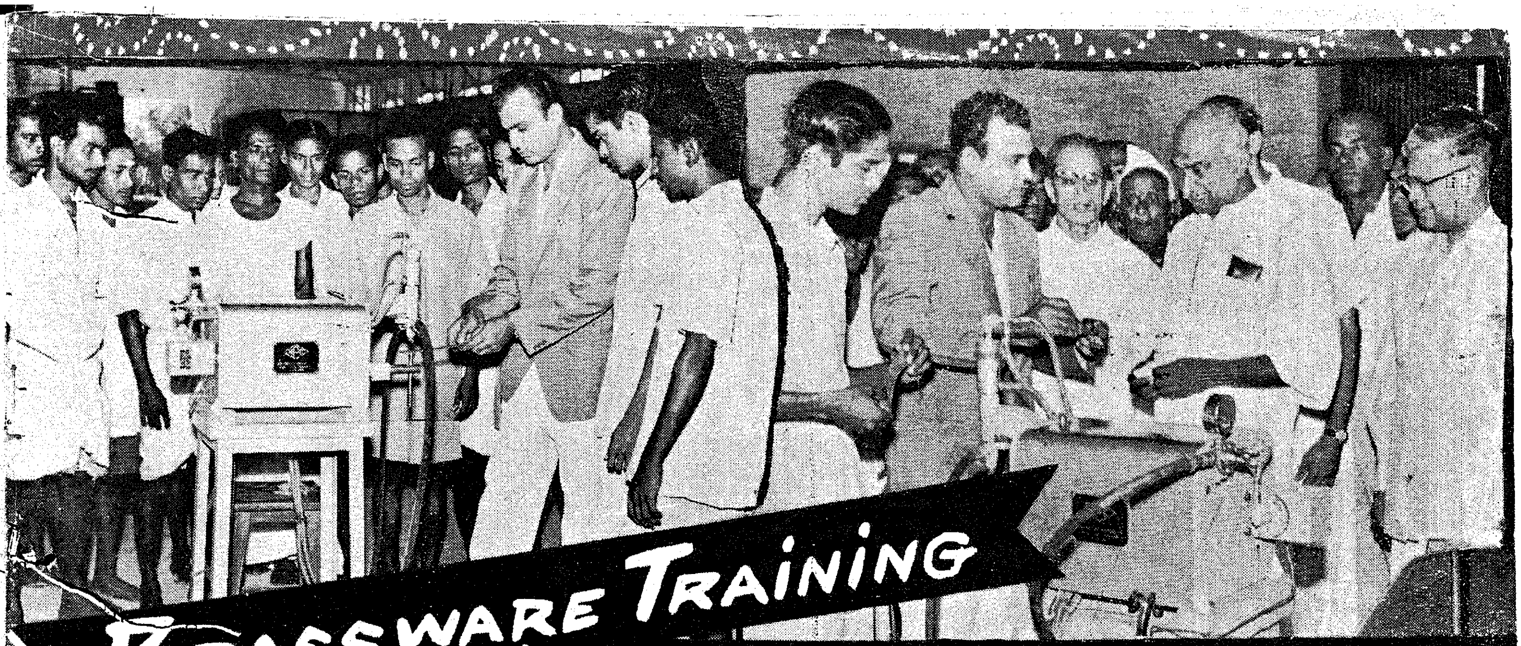
Coimbatore.—Moolanoor (Moolanoor firka, Thurambadi firka and some villages of Vellakoil firka).

Salem.—Edappadi (Edappadi firka in Tiruchengode taluk).

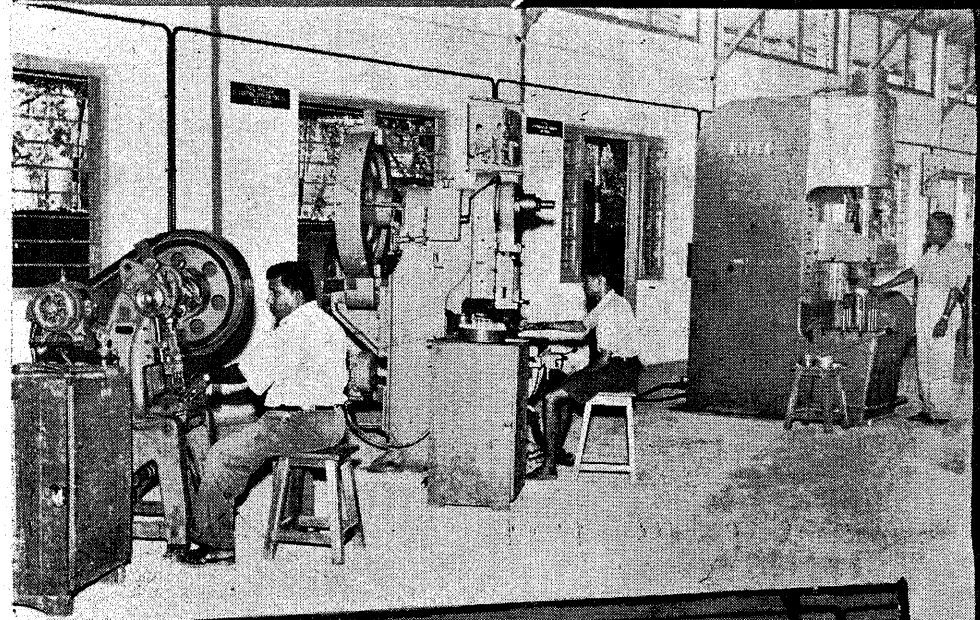
Tiruchirappalli.—(1) Thandoni (Vellianai firka and part of Karur firka); (2) Vyrichettipalayam (Uppiliapuram firka in Musiri taluk).

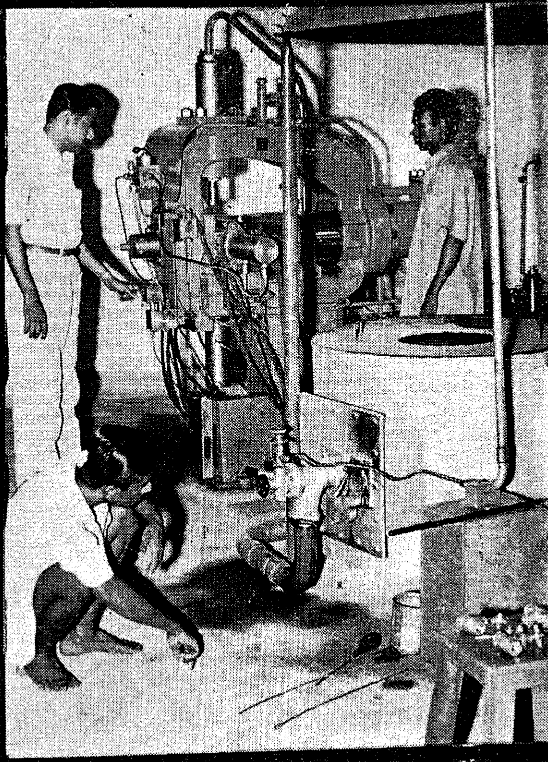
Tirunelveli.—Ottapidaram [Ottapidaram firka (whole), and 13 villages of Kadambur firka (part) in Koilpatti taluk].

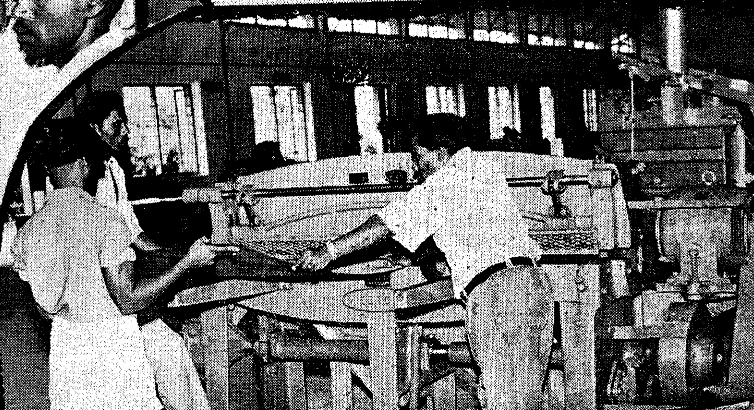
The minimum programme in the field of agriculture for pre-extension phase will comprise complete survey of agricultural conditions existing in each village of the block within a period of six months from its start; introduction of improved seeds; demonstrations to conserve all available waste material, viz., cattle dung, human and cattle urine, vegetable refuse for compost making; introduction of green manuring and fertilizers; selection of suitable land for the establishment of seed multiplication farm and horticultural-*cum*-arboricultural nursery in the block, and to assist the Agricultural Department in starting the same; and creating a climate for people's participation in the agricultural programme, viz., construction of field channels, tree plantation, soil conservation, plant protection, etc.

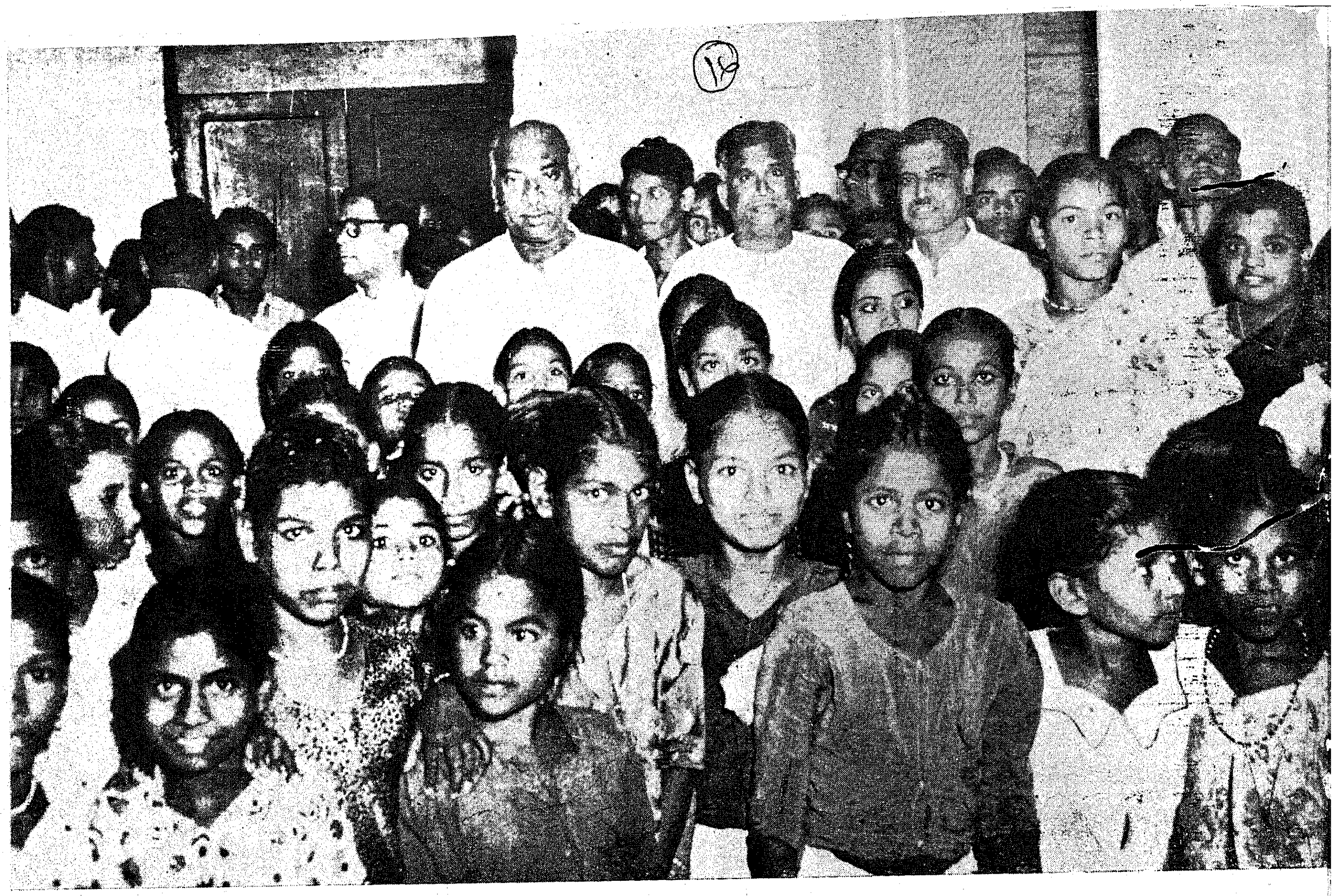


Brassware Training Cum Service Centre









One more hostel for Harijan girls was inaugurated by the Chief Minister on 2nd September 1958 at Rayapuram. The photo shows the Chief Minister and the Minister for Works with some of the inmates.

Committee on Agricultural Production invites Suggestions from Public

The eight-member Committee on Agricultural Production appointed towards the end of last month has already held one Main Committee meeting and seven of the nine sub-committees have also held one meeting each. The Government invite members of the public to place their views and suggestions before the Committee by means of written communication addressed to the Secretary, Committee on Agricultural Production, Food and Agriculture Department, Secretariat, Madras-9.

The Committee, of which Sri M. Bhaktavatsalam, is the Chairman, consists of Sri T. N. S. Raghavan, Commissioner of Food Production, Sri P. P. I. Vaidyanathan, Secretary to Government, Food and Agriculture, and Sri A. Venkatesan, Director of Agriculture (official members); and Sri A. R. Venkatachari, retired Chief Engineer, Sri V. K. Palaniswami Gounder, M.L.C., Sri M. G. Shanker, M.L.A., and Sri V. S. Thyagaraja Mudaliar, Tanjore (non-official members).

The terms of reference of this Committee are as follows : To examine the progress made by the various food production schemes in the First Five-Year Plan and the first two years of the Second Five-Year Plan to assess the relative efficiency of the different types of schemes in increasing food production and suggest modifications in the relative emphasis on the different types of schemes; to examine if the facilities provided to the farmers in the form of improved seeds, fertilisers, irrigation, etc., are put to the best possible use and suggest any additional facilities that are deemed necessary, to enquire into the adequacy of the administrative organization now in charge of the implementation of the Food Production Schemes and to suggest modifications in the organization which are considered advisable for greater efficiency; and to suggest any other measures for ensuring the speedy achievement of the maximum possible results from the Food Production Programme.

17

The Periyar Hydel Project

SRI V. P. APPADURAI, Chief Engineer for Electricity, Madras.

The Periyar Hydro-Electric Scheme is the biggest of the four schemes of the First Plan extending into the Second Plan period in Madras State. The scheme, when completed will be a major contribution to the Madras Grid adding 105,000 K.W. of installed capacity initially. The work on the scheme was formally inaugurated on the 11th February 1955 by the Chief Minister of Madras.

The Periyar river rises from Kallimalai, a peak on the ridge between Kerala State and Sankaranainarkoil taluk in Tirunelveli district on Madras side. In its upper reaches the river flows in a northerly direction for about 16 miles through thickly wooded forests and takes a turn to the west and flows for about 8 miles where a dam was constructed as early as 1893 by the Irrigation Department of the Madras Government. The course of the river below the dam is in a north-westerly direction till it joins the Arabian Sea near Cranganur. The total length of the river is about 130 miles.

The Periyar lake is on the Kerala side of the border between Madras and Kerala States and has a catchment area of nearly 240 square miles with an average annual rainfall of 100 inches. The height of the dam is 158 feet from the bed of the lake and the full reservoir level is 152 feet with a water spread of 10·21 square miles. The capacity of the lake at the full reservoir level is 15,662 million cubic feet.

The Madras Government, in pursuance of an agreement executed in 1886, acquired the lease rights of water of the Periyar catchment for irrigation purposes in Madurai and Ramanathapuram districts for a period of 999 years on payment of an agreed sum. For this purpose, the water of the lake is diverted into the Vaigai basin in the Madras State through a tunnel 96 square feet in cross section and 5,887 feet long capable of discharging a maximum of 1,300 cusecs.

Civil works and power station.

There is a drop of more than 1,000 feet between the exit of the tunnel and the Vaigai basin into which water is let in for irrigation purposes. The question of utilising this fall for the development of power was engaging the attention of the engineers from the very beginning of the Periyar Irrigation Project, notwithstanding the fact that being dependent on South-West monsoon, the full power could not be developed for a period of nearly three months in a year, i.e., from March to June.

With the proper regulation of the Periyar waters, however, it will be rendered possible to develop power during the non-irrigation period also, the water after generating power being stored in a new reservoir that has been proposed to be built at the lower reaches across the Vaigai for irrigation purposes. A certain quantity of water could, therefore, be discharged even during non-irrigation period also and stored in the Vaigai Reservoir to be used eventually for irrigation purposes.

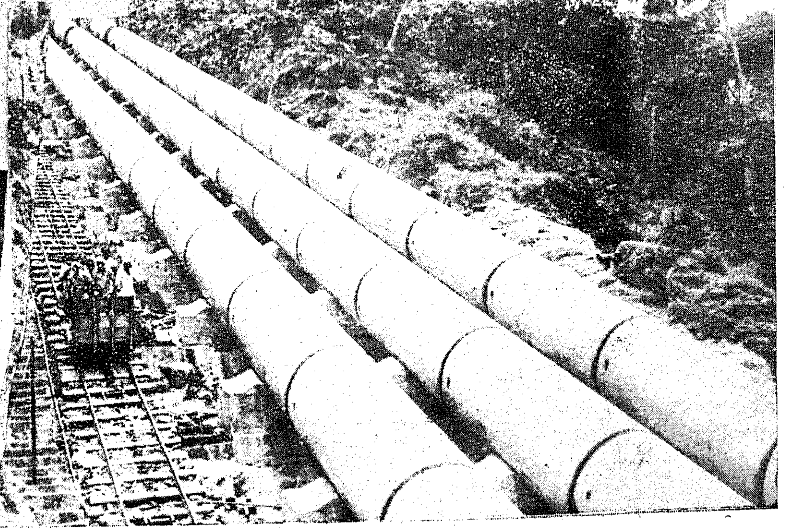
The present scheme provides for utilising a continuous discharge of 1,600 cusecs during irrigation seasons, i.e., from June to March and 500 cusecs from March to May during the period of irrigation closure. The cost of the Vaigai reservoir is being suitably apportioned between Public Works Department of the Government of Madras, and the State Electricity Board, as the Public Works Department has been considering its need separately for making use of the Vaigai river flows for increased irrigation in Madurai and Ramanathapuram districts.

The capacity of the existing irrigation tunnel is only 1,500 cusecs and this has been increased to 1,600 cusecs under the Periyar Hydro-Electric Scheme by increasing the area of cross-section of the tunnel from 96 square feet to 154 square feet. The cost of the improvement to the tunnel is also being shared by the State Electricity Board and Public Works Department of the Government of Madras.

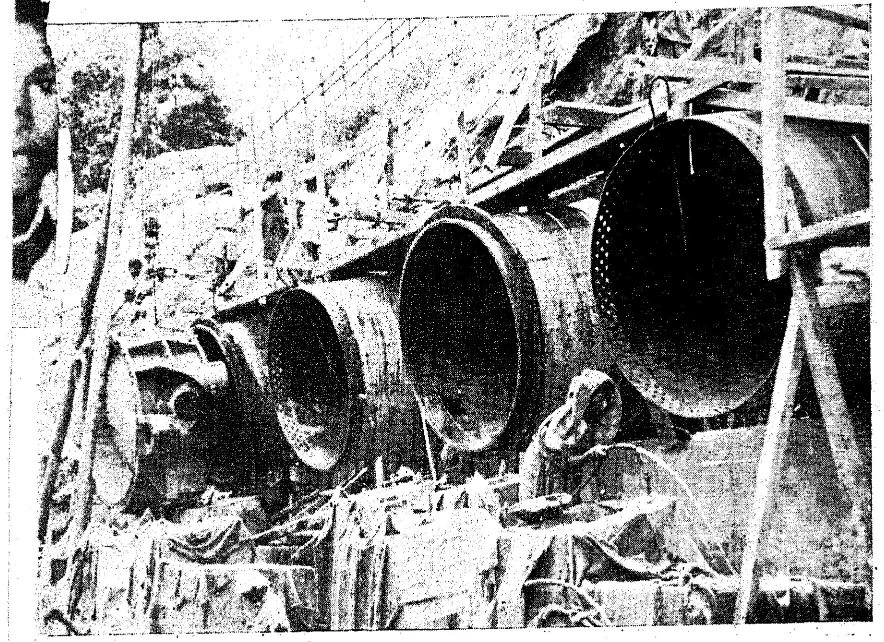
Water from the above tunnel discharges into a tunnel-pond to be formed by a forebay dam which is 93 feet high and has a capacity of 3 million cubic feet. Necessary surplussing arrangements and head works for irrigation outlet and pressure-tunnel for power-draft are provided at the forebay dam.

Water from the forebay reservoir is led through a power-tunnel 3,992 feet long and 154 square feet in cross section. This tunnel capable of discharging a maximum of 1,600 cusecs has been lined throughout with cement concrete. The power tunnel will terminate in a surge tank of differential type which will be 180 feet high and 40 feet in diameter, sunk entirely in rock excavation and concrete lined.

Two low pressure pipe lines 10 feet in diameter and 194 feet long will take off from the surge tank and each low-pressure pipe line then branches off into two penstocks of 6 feet 6 inches diameter. Of these four high pressure pipes, one will be blank flanged for use

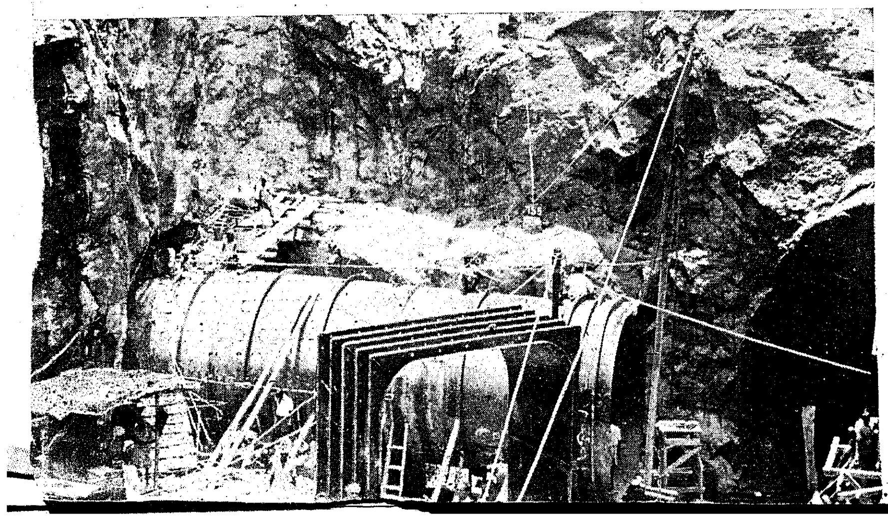


...se gigantic pipes take the water from the Reservoir to the power station.



Pipes being welded together.

In some places tunnels had to be dug in order to lay the pipe lines.



Periyar Hydel Project . . . . .

at a later date and other three pipes will be connected to individual turbines at the power station. Each pipe will be 3,130 feet long and in four sections of diameter 78 inches, 72 inches and 66 inches and 45 inches respectively and is capable of discharging a maximum of 400 cusecs. The penstock will roughly follow the line of shoulder which runs from the surge shaft to the powerhouse. The pipes were supplied by Sakai Iron Works, Japan.

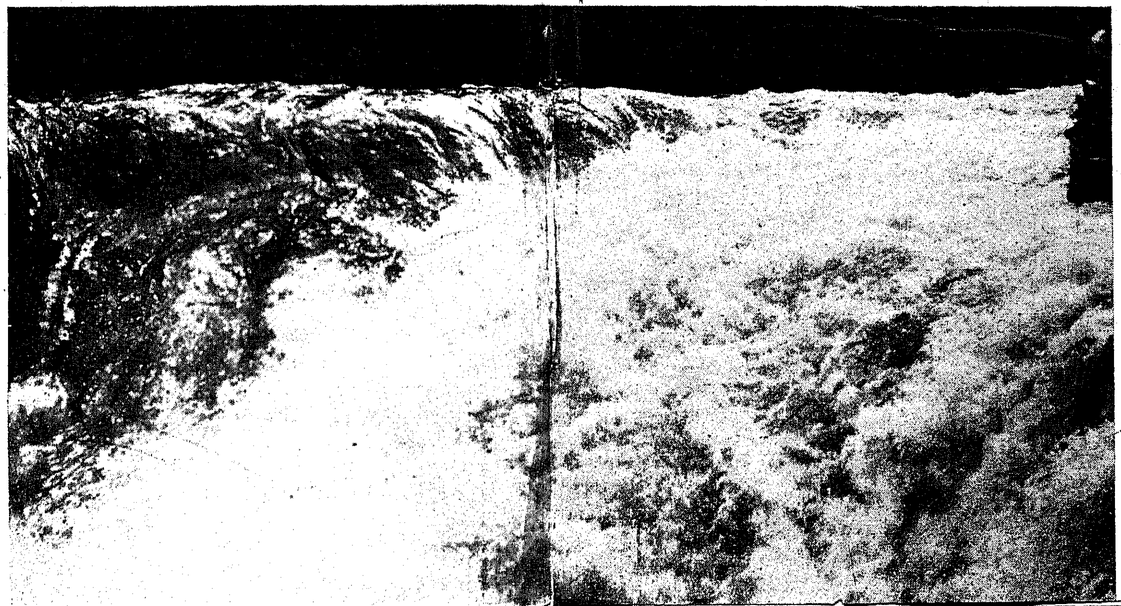
The powerhouse is located in the ghat section of the main road from Cumbum to Thekkadi and is about 55 miles from Theni Madurai district. The gross head developed is 1,270 feet.

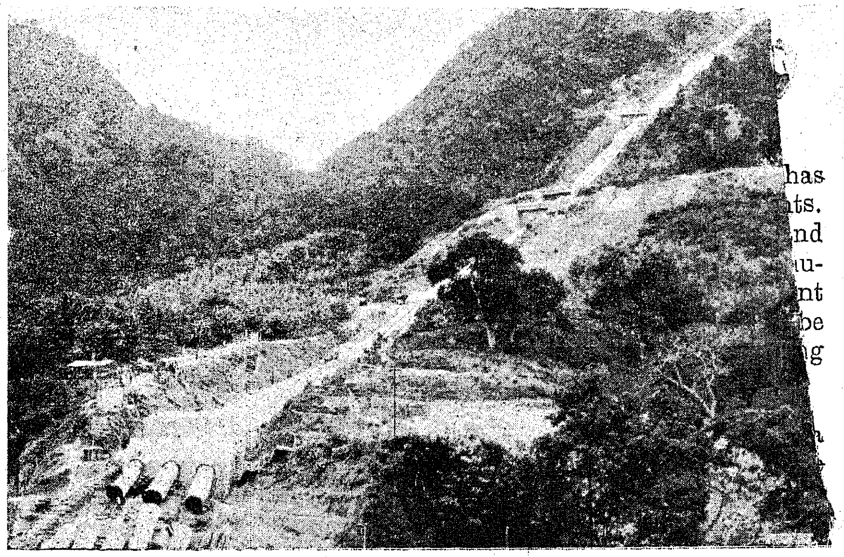
There will be initially three 50,000 h.p. reaction turbines 'Voith'—German make—each directly coupled to 35,000 K.W., 0·85 P.F., 3 phase, 50 cycles, 11 K.V. generator A.R.G. (German) make. A fourth set will be installed at a later date. The transformer yard is located by the side of the powerhouse.

The scheme is estimated to cost Rs. 10·09 crores.

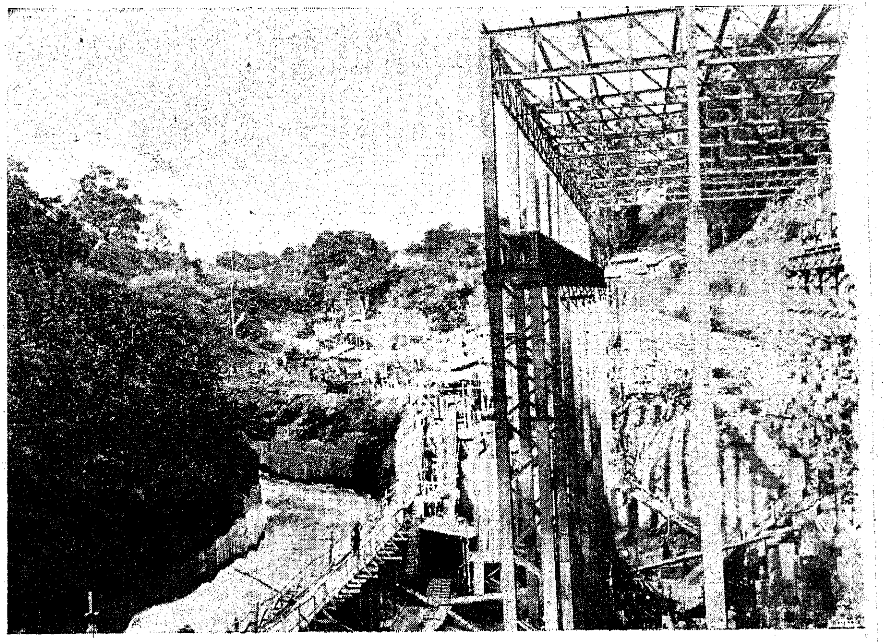
The scheme in all aspects is in an advanced stage of progress. There has unfortunately been a delay of about six months in the delivery of the generators and the first unit is to be commissioned on October 12, 1958. The scheme is programmed for completion by March 1959. This is the first project in the history of the Madras Electricity Department (now Madras State Electricity Board) to have been completed in a record time of 3½ years.

These swirling waters are tamed to give us power.



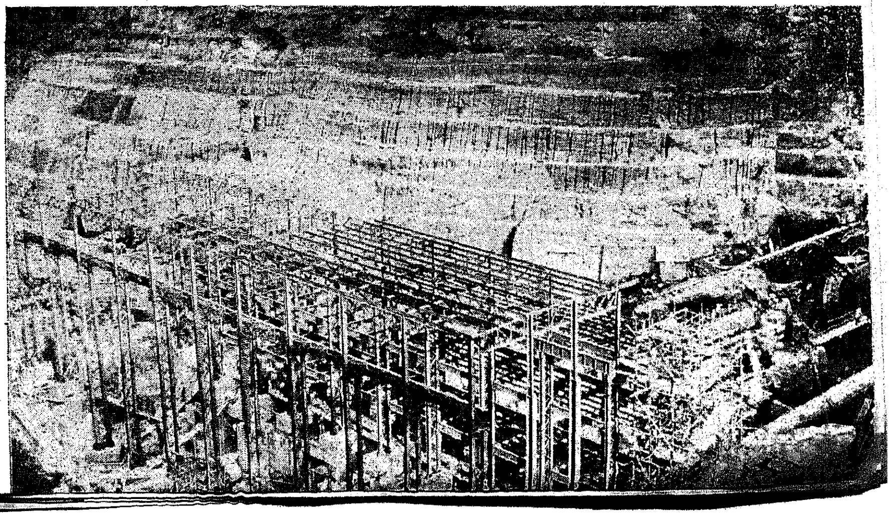


The pipe line.



The Powerhouse under construction.

Another view of the Powerhouse under construction.



INTRODUCING METRIC SYSTEM

A Great Reform from October

The story is told of a man from Bombay who, on [illegible] first visit to North India, ordered a *pao* (quarter [illegible]) of *rabadi* (a sweet) and ate it with relish. His pleasure was, however, short-lived because he was taken ill. He discovered that he had eaten twice as much as he normally did, the *pao* in North India being about double the weight represented by the *pao* then prevalent in Bombay.

True or apocryphal, the story illustrates the dangers inherent in the multiplicity of weights and measures within a country.

Although the seer and the maund are in common use in different parts of India the weight of the seer varies from 24 tolas to as much as 112 tolas. There are over 150 different varieties of weights as well as linear measures and capacity measures in our country. In several cases the seer or a common weight or measure denotes different things even within the same district, not to speak of different districts of a State. Thus, there may be one seer for foodgrains, another for milk and so on.

Order out of chaos.

It was to end this chaotic state of affairs that a study of the problem was undertaken by the Planning Commission in 1955. The need for a uniform system was recognized. What could this system be? Detailed and prolonged consideration and discussion followed. The choice ultimately fell on the metric system which is followed by more than two-thirds of the world's population.

The main virtue of this system lies in its simplicity. Recalling our early school-days when the schoolmaster laid great store by the memorizing of multiplication tables, the table of 10 was the easiest to memorize and reproduce. The metric system is essentially a decimal system, units of weight or measure going up in the ratio of 10. Thus 10 grams make one deka gram, 10 deka grams one hecto gram and 10 hecto grams one kilo gram. Similarly one centimeter consists of 10 millimeters, one decimeter 10 centimeters and one meter 10 decimeters.

With the decimal system of coinage already in force, it is not difficult to realize how simple and effortless our day-to-day calculations and therefore the conduct of business will become when metric weights and measures are enforced.

Out heritage.

The decimal system, on which the metric system of weights and measures is based, was India's gift to the world when about 2,000 years ago an Indian mathematician discovered the value of '0' and introduced what has now become the universal system of counting. In adopting the metric system India therefore goes back to her own heritage.

The metric system in its present form was fashioned soon after the French Revolution. It is not without significance that while in our Constitution we have enshrined the principles of liberty, equality and fraternity, we should likewise adopt another reform of great significance which owed its birth to the French Revolution.

In 1956 the Parliament of India passed legislation to adopt the metric system. Called the Standards of Weights and Measures Act, 1956, it lays down standards of length, area, volume and mass, to replace the standards now in vogue.

Phased changeover.

It was, however, recognized that a reform of this magnitude had to be a slow process, phased over a number of years. It was, therefore, provided that the changeover to the new system should be effected over a period of ten years.

After a series of consultations with the State Governments, representatives of industries and other interests, it has been decided that a beginning should be made with the introduction of metric weights in trade generally in selected areas in different States from October 1, 1958. On the same day the system will also be introduced in major industries like cotton textiles, iron and steel, engineering, heavy chemicals, cement, salt paper and coffee.

To provide for a smooth changeover, even in these selected areas and industries the use of existing units will be permitted for a period of two years, i.e., till September 30, 1960. This means during this period of two years the metric system as well as the locality prevalent units will co-exist, giving an opportunity to the people to familiarize themselves with the new units. At the end of the two-year period the new weights will completely replace the existing units in the selected areas.

The new system will be gradually extended to larger areas where again a transitional period of two or three years will be allowed. At the same time the enforcement of the new system will cover other industries and economic activities, both in the public and private sectors. By the end of 1966 the country will have completely changed over to the metric system.

Thus from October 1, in the selected areas, shopkeepers will have the option to sell foodgrains, provisions, vegetables, coal, etc., by kilograms instead of seer or any prevalent unit of weight. Transactions by measure like retail sale of cloth will continue to be in the present units like the yard. In States like Madras and Kerala where foodgrains are sold by measure the use of the present measures would not be affected.

Decimal coinage—A pointer.

Decimal coinage was introduced on April 1, 1957 and by now a large majority of people have acquired a degree of familiarity with it. Indeed, some people have become so proficient that whenever they part with small change, the balance of advantage, in the form of a Naya Paisa or two, is always in their favour.

There is no doubt that, nothwithstanding some initial hardship that the introduction of the metric system of weights and measures will cause, before long the people will get used to the new units and once the transition is over the new system is bound to be universally liked.

In the field of major industries the reform from October 1, will take the form of use of the metric units in the purchase of raw materials and sale of products. Prices and quantities would also be expressed in metric units in all sale and purchase transactions. The change will, however, be limited to the transactions between the factories and their suppliers and customers. Retail sale in the products of these industries will not be affected.

For the convenience of one of the industries, viz., jute, where the trading began on July 1, the date of the change over was advanced by three months. In other words, the system is already in force in wholesale transactions by mills in the jute industry.

Government departments and undertakings have also to change over to the new system in a phased manner. From October 1, Government departments and undertakings may use the metric system in the purchase and supply of stores. Quantities and prices will be expressed in metric units in indents and tenders. The Indian Airlines Corporation and its international counterpart, Air India International, will book cargo and luggage in metric weights and measures.

New surveys of land and mines will be on metric scale, but existing maps will continue to be used with conversion tables drawn on them. Technical, statistical scientific and marketing data collected and published by Government departments will also be expressed in metric units.

Preparatory work.

Preparatory work, to herald the new system, has been undertaken by the Central and State Governments. A survey of manufacturing capacity of weights and measures has been made. This indicates that manufacture of new weights and measures will not present any difficulty. Approved manufacturers will be licensed by the State Governments. Weighing machines will be recalibrated to metric units.

Legislations for enforcing weights and measures, a State subject, have been or are being enacted by the State Governments. The organizational set up is also being attended to. The weights and measures departments in States, where they already exist, are being strengthened and are being organized anew where they do not exist. Training of personnel is in progress.

A publicity campaign to familiarize people with the new weights and measures has been started.

India's decision to change over to the metric system has aroused world-wide interest and in the two big countries where so far this system has not been introduced, the United Kingdom and the United States of America, questions have been asked why they also should not adopt the metric system when India is doing it. In the past 100 years 58 countries have gone over to the metric system. They have not regretted their decision. Many of these discarded their uniform indigenous systems in favour of the metric one. Many neighbouring countries in Asia also follow this system.

Unifying force.

There is no doubt that in the long run the system will endear itself to the people of India and the saving in time and effort to all classes of people, particularly to the younger generation at schools and colleges, will be immense.

What is more important, a uniform system of weights and measures will be another valuable contribution towards national unity. At present the great diversity of weights and measures is a dividing factor. The day when an Indian citizen can travel across the country without having to adjust his mind constantly to a multiplicity of weights and measures, a great step towards national unity will have been taken.

In Madras State.

In Madras State, the Metric System will be brought in force in the Districts of Madras, Chingleput, North Arcot and South Arcot from October 1.

Preliminary arrangements for this change over have been completed and the results of the working of this system in these districts will be of much use when this system is extended to other districts also.

The Chief Minister Sri K. Kamaraj, dealared open the Tuberculosis Sanatorium on Capper Hills at Cuddalore on 6th September 1958.

Fighting Tuberculosis

Report of the District Tuberculosis Association, South Arcot

The horrors of Tuberculosis have drawn the attention of the people and have made them resolve that this disease must be eradicated. Anti-tuberculosis work gained in importance and various associations were formed and funds were collected. In India, funds were collected all over the country, in the name of King Emperor George V Memorial Thanks-Giving Fund, and the South Arcot district collected Rs. 9,849, in the year 1939. This collection was intended for the Tuberculosis relief work. The parent organization was organized in the year 1937 and the State associations later. By the time the district formed the affiliated associations a couple of years had passed and the South Arcot District Association was started on the 7th August 1939. It took nearly two years to get this organized and it was registered on 20th May 1941. The Founder-President was Sri V. N. Kudva, I.C.S., the then Collector of South Arcot and the Secretary Dr. N. N. Sugir, the then District Medical Officer.

Through the energy and resources of the Provincial Welfare Fund and other social organizations of this district, a ward for eight patients and also an X-Ray apparatus for the Government Headquarters Hospital were constructed in 1947.

The Madras Secretariat Party's help was sought for and through their performances this Association gained Rs. 79,060. The District Board of South Arcot gave Rs. 35,000. The Municipalities of this district, Cuddalore, Chidambaram and Villupuram donated Rs. 10,000 (Rupees Ten Thousands) in all. Under the local development works, Government's part of contribution to this institution amounted to Rupees 22,500. The Provincial Welfare Fund Organization. South Arcot, and Sri Venkata Subba Reddiar of Kiliyanoor contributed Rs. 5,000 each, for the construction of single unit special wards. The Guild of Service, South Arcot, allotted Rs. 2,500 for a special ward. Rupees 22,348 were allotted from Seals Sales Campaigns. From the Government of India Health Minister's discretionary funds we got Rs. 25,000 in two instalments for the purchase of the X-Ray plant and equipments for the Tuberculosis Hospital at Capper Hills. The District Welfare Association of South Arcot, out of the general collections made, had given Rs. 13,000 without any obligation whatsoever and also a loan of Rs. 3,500 has been assured.

In all, the Association had a total receipt of Rs. 2,36,748 and with the accrued interest and other small donations and subscriptions, a sum of Rs. 2,41,000 was made into. We have spent on construction, Rs. 1,75,752, on X-Ray plant Rs. 25,000, on other things like pipes, motor Rs. 10,000, hospital equipments Rs. 10,000 and on purchase of lands and administrative purposes Rs. 15,000.

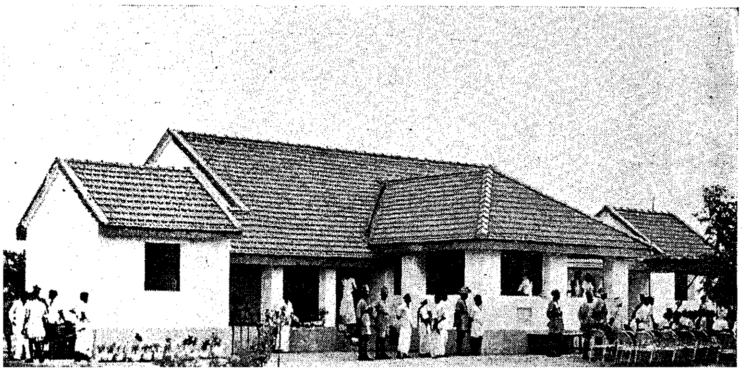
This district being poor, and the public co-operation being practically nil, the Association thought of utilizing the entire funds for the construction of buildings, purchase of equipment, apparatus and appliances and to arrange to have at least facilities for treatment of 25 to 30 patients. It was also thought, that the people might become more liberal-hearted,

if they see these useful buildings springing up before them. The Sanatorium was located on the Capper Hills, just a mile from Cuddalore. The foundation stone was laid by Sri Shri Prakasa, the then Governor of Madras, on 13th November 1952, on the grounds 108 acres in extent.

We prepared an estimate for a 100-bed hospital with modern constructions. It was found that this was too ambitious and could not be effected. Subsequently a revised estimate for a non-recurring expenditure of Rs. 7,15,500 and for an annual recurring expenditure of Rs. 1,73,542 was made. But construction programme was gone through steadily and the buildings to accommodate about eighty patients and quarters for a few members of the staff have been built, to complete the first stage of the programme. The Association tried in vain to find the money, at least Rupees Two Lakhs to go through the second phase. Then the association decided to hand over the entire assets to Government of Madras and to request them to start this Sanatorium.

On 28th September 1957 when the Minister for Health, Sri M. A. Manickavelu, came to Cuddalore, we took the Hon'ble Minister round the Sanatorium and reiterated our request. We had an indication of a favourable consideration from the Hon'ble Minister for Public Health. He wanted us to prepare a budget of expenditure for admission and treatment of twenty cases to start with. Dr. V. N. Viswanathan, the District Medical Officer, very kindly prepared the estimate. This budget for a non-recurring grant of Rs. 45,000 nearly and Rs. 20,000 was submitted on 28th October 1957 to the Hon'ble Minister. Even here a clear understanding has been made that the association will take up the responsibility to cover about Rs. 1,75,000 the deficit or the shortfall on the expenditure. This Association existing in a poor district, is really taking a bold venture in accepting the offer, when the Government had, after careful scrutiny and consideration, sanctioned Rs. 36,000 (Rupees Thirty-six Thousands) on non-recurring grant and Rs. 20,000 (Rupees Twenty Thousands) on annual recurring expenditure.

The Sanatorium on Capper Hills.



The Sanatorium needs a kitchen, overhead tank and water distribution through pipe lines, sanitary drains and underground sewage, Operation Theatre, Laboratory, X-Ray Block, Electricity extension. On the patients' diet and drugs, payment to establishment and other expenses, the organization needs about Rs. 36,000 even for very economical work. Definitely the over-all charges on each patient will be relatively high as the strength will be only twenty.

Government have imposed a few essential conditions—

(1) This Sanatorium must afford free treatment for a third of its strength.

(2) People of the Madras State must have preference certainly for admission in this hospital. The people of Kerala and other States may also be admitted if provisions are there.

(3) Five beds must be allotted to the free treatment of Government servants and the members of their families, subject to certain conditions.

(4) Facilities must be given for training medical students.

(5) The annual accounts, audit and the periodical audits of the accounts must be done by the Divisional Examiner of Local Fund Audits and the management must bear the bill of the audit.

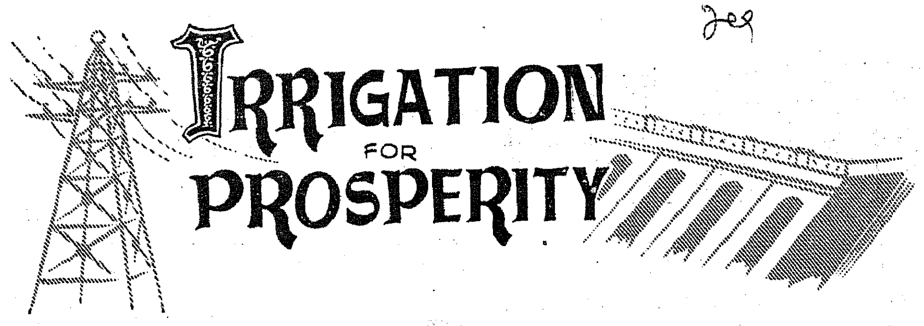
Industrial Co-operative for Artisans

The Government have advanced a loan of Rs. 72,000 to enable the formation of an Industrial Co-operative for the Steel Trunk Workers at Nagapattinam, who have been thrown out of employment due to scarcity of raw materials such as steel sheets and bolt nuts, as also lack of machinery, etc.

The Scheme is estimated to involve a non-recurring expenditure of Rs. 50,000 on land, buildings, machinery and a recurring expenditure of Rs. 3,600 on staff besides a sum of Rs. 33,000 required as working capital representing four months' requirements of raw materials, wages to labour, etc. A sum of Rs. 11,000 will be collected as share capital from the members of the Industrial Co-operative.

To enable the formation of an Industrial Co-operative for the Blacksmiths and Carpenters at Thooknaickenpalayam in the Lower Bhavani Pilot Project area, the Government have advanced a loan of Rs. 52,700. This society is intended to function as a production and sales society supplying raw materials to its members and providing them workshop machinery and other facilities. The loan will help the society to purchase directly the required machinery instead of on hire-purchase basis.

IRRIGATION FOR PROSPERITY



The Second Five-Year Plan provides for the completion of seven incomplete medium-sized irrigation projects carried over from the First Five-Year Plan and also the execution of the following new schemes :—

1. New Kattalai High-Level Canal Scheme.
2. Pullambadi Canal Scheme.
3. Vidur Reservoir Project.
4. Neyyar Second Stage (Kanyakumari district).
5. Utilization of waters of the west-flowing rivers —Parambikulam-Sholiyar-Aliyar Project.

It also provides for the execution of some major and medium irrigation schemes relating to the Kanyakumari district and the Shencottah taluk in Tirunelveli district which are expected to be taken up after 1958-59.

The Planning Commission has approved a total plan ceiling of Rs. 1,233·54 lakhs for all irrigation schemes included in the State Second Five-Year Plan. Against this, the progress of expenditure has been as follows :—

	RUPEES IN LAKHS.
(1) Total Five-Year Provision	1,233·54
(2) Expenditure incurred in 1956-57 ..	410·87
(3) Expenditure in 1957-58	252·26
(4) Budget Estimate for 1958-59 ..	151·05
(5) Total estimated expenditure for three years (1956-57 to 1958-59) [items (2) to (4) above].	814·18
(6) Balance available for expenditure during the remaining two years 1959-60 and 1960-61 [Item (1) *minus* item (5)].	419·36

The original plan provision for 1957-58 was Rs. 210·32 lakhs and the Revised Estimate for the year was Rs. 286·52 lakhs. Against this, the expenditure actually incurred up to end of March 1958 was Rs. 252·26 lakhs. There was thus no appreciable shortfall in expenditure during 1957-58.

Taking physical targets in terms of utilization of irrigation facilities, a total extent of 1·50 lakhs acres of new area is expected to be brought under irrigation and an extent of 1·36 lakhs acres of existing ayacut will receive better irrigation facilities during the Second Plan period by the execution of eleven schemes.

Against the above targets, an extent of 42,974 acres of new area and 95,360 acres of existing ayacut have been brought to beneficial use from 1st April 1956 up to end of March 1958 under the schemes included in the Second Plan. In addition to the above, a large area (for which details are given below) has also been brought under irrigation in Coimbatore district under the Lower Bhavani Project completed at the end of the First Five-Year Plan.

The salient details of the different projects and the stage of progress or development achieved thereunder are also given below :—

Lower Bhavani Project.

The contemplated ayacut under Lower Bhavani Project is 207,000 acres, of which 10,000 acres are to be paddy and the balance of 197,000 acres are to be irrigated " dry ". During 1957-58, 195,000 acres were thrown open for irrigation. Against this, an extent of 157,300 acres has actually been brought under cultivation. In addition, an extent of 90,000 acres of second crop was also raised under this Project. Also paddy which requires larger quantities of water was grown on more than 40,000 acres, against 10,000 acres contemplated under this scheme. The progress in this scheme is satisfactory.

Manimuthar Project.

This project envisages the construction of a reservoir across the Manimuthar river, a tributary of the Thambaraparani river in *Tirunelveli district*. The capacity of the reservoir is 5,500 m.c.ft.

The dam has been completed except for the manufacture and erection of spillway gates and other minor works. They were expected to be completed and erected before the north-east monsoon. The main canal and distributaries have been completed and water was let down for irrigation. About 242 tanks have received full supply against the targetted number of 300 tanks in the upland areas and the supply of water under the Thambaraparani system also was stabilized. The remaining tanks have also received full supplies by rain. Hence the full extent of

20,000 acres of new area and 83,000 acres of existing ayacut is estimated to have been covered under this scheme during the year.

Araniar.

The Araniar Project consists of a reservoir with a capacity of 1,863 m.c.ft of water across the Araniar river in Chingleput district. The project has already been completed in all respects. But due to delay in the acquisition of submersible foreshore lands, the reservoir could not be put into commission. However, 5,700 acres of first crop and 2,953 acres of second crop have been benefited under Surattapalli Anicut. The reservoir has not yet been opened for irrigation due to delay in the acquisition of water-spread lands in Andhra State.

In this connection, it may be stated that according to Pataskar's award, the project will go to Andhra State and that consequently the question of apportionment of cost of the project, etc., is under consideration of the Committee set up by the Zonal Council.

Mettur Canals Scheme.

This scheme is located in Salem district. It consists of a canal of 39 miles from below the high-level sluice of Mettur Dam to irrigate 45,000 acres in *Salem* and *Coimbatore districts.* The total cost of the scheme is Rs. 183·00 lakhs.

The work on the scheme has been almost completed except for certain minor works in the distributaries of the East Bank Canal. Water has also been let down in the canals and distributaries for irrigating an extent of about 42,600 acres. The ayacut so far developed is about 17,016 acres in West Bank Canal and 18,000 acres in East Bank Canal or 35,016 acres in all against a total contemplated ayacut of 45,000 acres which include 18,000 acres thrown open for irrigation during the First Five-Year Plan period. Hence the effective target and achievement under the Second Plan are 27,000 acres and 17,016 acres *respectively*. Further development is being watched.

Amaravathi Reservoir Project.

The Amaravathi Reservoir Project in Coimbatore district consists of a reservoir of 3,600 m.c.ft. capacity across the river Amaravathi. The dam is partly of masonry and partly of earth. The progress achieved is as follows :—

Headworks—Masonry Dam.—Work completed for raising pins and fixing shutters for the spillway.

Earthdam : Work on Earthdam is completed in all respects. Construction of the Punganodai Bridge is in an advanced stage of progress.

Main Canal and Branches.—The excavation of Main Canal from 0/0 to tail end has been completed and water for irrigation has been let into the canal from 15th November 1957 and cultivation to the extent of 4,027 acres also raised. So far an extent of 15,000 acres of ayacut is reported to have been localized against a target of 21,000 acres.

Excavation of distributaries and field bothies has been completed. Further work relating to excavation of a new distributary and extension of some distributaries for covering an additional ayacut of 6,000 acres was taken up in April 1958.

Vaigai Project.

The Vaigai Reservoir Project in Madurai district is for the construction of a reservoir with a capacity of 6,800 m.c.ft. across the river Vaigai. It will irrigate about 20,000 acres. The construction of the dam is progressing according to schedule.

Masonry dam construction is nearing completion and about 1,900 units of masonry and concrete work remain to be done. Nearly 72 per cent of earthdam formation has been completed to end of this month. Excavation of Tirumangalam Main Canal is in progress and about 73 per cent of the earthwork has been completed. Investigation of improvements of Periar Main Canal has been taken.

Sathanur Project.

This Project consists of a reservoir across the river Ponniar in North Arcot district with a capacity of 4,600 m.c.ft. with provision for increasing it to 8,100 m.c.ft ultimately. The construction of the reservoir has been completed.

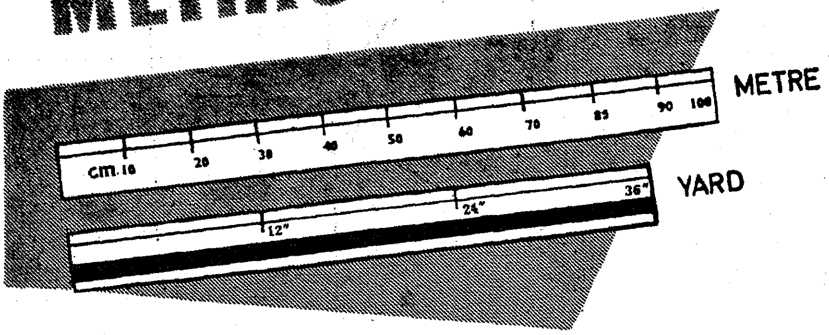
Canals.—All works up to mile 19/9 of the main canal have been completed except for minor finishing items of certain works. Out of 8½ miles length of canal to be lined, 8 miles have been completed. All cross masonry works are nearing completion, to the length required, for letting water for an extent of 12,000 acres during this year. Due to low storage as a result of bad season, water was let down for about 5,000 acres. Out of the above, a considerable portion was allowed for supplying the existing ayacut in the Tirukoilur Anaicut area and only a limited supply could be given in respect of *new area.* The total area brought to beneficial use was 3,138 acres.

Krishnagiri Reservoir Project.

This project consists of a reservoir with a capacity of 2,400 m.c.ft. across the Ponniar river in Krishnagiri taluk in Salem district. The formation of the dam has been completed except for certain minor items. Formation of left canal from 2/0 to 9/2 has been completed in all respects. In the right side canal, the earth work excavation of the canal up to M. 6/0 has been completed. The excavation from 6/0 to tail-end is in progress. The cross masonry works up to M. 4/1 have been completed, except for the aqueduct at M. 4/1 which is under execution.

(*Continued on page* 29)

WHAT IS THE METRIC SYSTEM ?



The Metric System derives its name from the Metre, which is the primary unit for measuring length. In this system, as in all decimal systems, the basis of calculation is 10. We multiply or divide any unit of length, weight or volume by the same number i.e. 10.

In the Metric System, the multiples of a unit have the prefix *Deca* (10 times), *Hecto* (10×10=100 times) and *Kilo* (10 × 10 × 10 = 1,000 times). The sub-units have the prefix *Deci* (1/10) *Centi* (1/100) and *Milli* (1/1,000).

THE CHANGE-OVER TO THE METRIC SYSTEM OF WEIGHTS AND MEASURES BEGINS FROM OCTOBER, 1958

KNOW THE METRIC LENGTHS

The primary unit of length is

THE METRE

=40 inches approx.
1 kilometre = 5 furlongs

SUB-UNITS

10 millimetres	= 1 centimetre
10 centimetres	= 1 decimetre
10 decimetres	= 1 metre

MULTIPLES

10 metres	= 1 decametre
10 decametres	= 1 hectometre
10 hectometres	= 1 kilometre

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2

ISSUED BY THE GOVERNMENT OF INDIA

in the years 1875, 1876, 1891, 1899, 1904, 1908 and 1923.

The rainfall in the district is depen dant both on the south-west and the north-east monsoons. Both of ı get dried up when they reach district. The north-east monsoon somewhat stronger except in the eastern taluks of Arkonam, Cheyyar and Wandiwash. The rainfall is generally inadequate.

Soil.

The eastern portion of the district is almost a stretch of unbroken plain. The central and southern parts are mostly hilly. The western portion rises gradually towards the Mysore plateau along the Kangudi Zamindari of Chittoor district. The soils are red ferruginous loams and sands with black area to the extent of about 16 per cent. The black soil is confined to the neighbourhood of rivers Palar, Ponnai and Cheyyar and to the ayacuts of a few big tanks. The black clay is found in Gudiyatham, Wallajapet, Arkonam, Cheyyar and Vellore taluks.

Irrigation.

Irrigation is based on water-supplies from tanks, river channels, kasam channels snd wells. The three major rivers which contribute largely to irrigation in the district are the Palar, the Ponnai and the Cheyyar across which anicuts have been constructed. Channels, often, several miles long are dug in the sandy beds of rivers to tap the underground flow which is remarkably copious. Spring channels are also dug, especially in Gudiyatham taluk to utilize spring water. Several hill streams feed numerous tanks and the precarious sources are supplemented by a very large number of wells which are a feature of the district. Many tanks depend on the rains for supply. Under the Grow More Food Scheme, works involving, the restoration of damaged anicuts the repair of the existing supply channels, etc., have been undertaken. Owing to dependants mostly on rainfall the district suffers from drought and failure of crops in years of poor rainfall.

A statement showing the number of minor irrigation sources and their ayacuts as well as the ayacuts of major irrigation works in the taluks of the district is given below :—

Name of the taluk.	*Total number of sources in the charge of Revenue Department.*			*Total ayacut in acres.*	*Number of major irrigation sources.*	*Area irrigated by major irrigation sources in acres.*
	Tanks.	*Spring and river channels.*	*Total.*			
Gudiyatham	84	232	316	19,518	33	7,644·76
Vellore	100	110	210	12,691	28	5,894·03
Wallajahpet	145	56	201	15,719	36	26,506·75
Arkonam	97	22	119	7,941	49	10,041·85
Tiruppattur	170	72	242	7,932	3	999·69
Polur	220	22	242	17,032	29	9,066·00
Arni	..	..	..	..	21	7,289·19
heyyar	196	40	236	13,237	50	18,355·54
andiwash	312	6	318	18,956	106	16,931·30
hengam	208	32	240	15,734	23	5,546·00
Tiruvannamalai	306	29	335	19,563	12	3,313·00
	1,838	621	2,459	148,323	390	111,588·11

Food and commercial crops.

The main occupation of the people is cultivation. The total area of lands normally cultivable is 1,109,300 acres. Paddy, cholam, cumbu, samai, ragi and varagu are the food crops raised in this district. Korra and maize are also cultivated in limited extents. Groundnut, gingelly and sugarcane are the chief commercial crops.

Railways.

There are 130½ miles of broad gauge and 86½ miles of metre gauge of railway in the district. The line from Madras to the west-coast runs across the northern part of the district with lines branching off therefrom to Bombay and Bangalore. A metere gague line connects Arkonam with Chingleput and another metre gauge line starting from Villupuram in South Arcot passes through Tiruvannamalai, Polur, Vellore, Gudiyattam taluks into the Chittoor district cutting the main broad gauge linc at Katpadi Junction. A small branch line of four miles connects Ranipet with the main line at the Wallajah Road station. There is no railway in Cheyyar, Wandiwash and Chengam taluks. All the taluk headquarters except Wallajahpet, Arni, Cheyyar, Wandiwash and Chengam are served by railway. Wandiwash, however, is a railway out-agency served by Tindivanam and Acharappakkam railway stations. Arni also is an out-agency for parcels and goods and is served by Arni Road station. Chengam is also a railway out-agency for parcels and goods and is served by the Tiruvannamalai railway station. Tiruppattur railway station serves the parcels and goods out-agency of Krishnagiri in Salem district.

flowing from north to south in the Gudiyatham taluk. They join in the Palar near Ambur and Gudiyatham respectively. The surplus course of the Kaveripakkam tank in Arkonam taluk gives rise to the Courtillayar river flowing into Chingleput district.

The next important river of the district is the Cheyyar. It rises in the Javadi Hills. Flowing in a southerly direction at first, it turns south-eastward near Chengam and after flowing in that direction over a distance of about 8 miles, it strikes a north-easterly course and passess through Polur, Wandiwash and Cheyyar taluks. Within the limits of Cheyyar taluk the river flows almost west to east and enters the Chingleput district to join the Palar in that district.

The South Pennar flows through the southern portion of Chengam taluk and enters the limit of South Arcot. Till recently this river was not of considerable importance to the district as its water was not utilized for irrigation purposes. A reservoir is being constructed near Sathanur with a capacity of 4,600 M.C. feet which is capable of being increased to 8,000 M.C. feet ultimately. The construction commenced during the First Five-Year Plan and is nearing completion. The scheme has brought 15,300 acres under cultivation.

Forests.

The area covered by forests in the district is 1,198·43 square miles which is about a quarter of the area of the entire district. The forests in Gudiyatham taluk are of a fuel and scrub type. The reserved forests in the other taluks consist of hill forests, plains forests, scrub growth and Palar river plantations. The hill forests contain Sandalwood and bamboos. The estate forests taken over in Arni and Tiruppattur consist of scrub jungle.

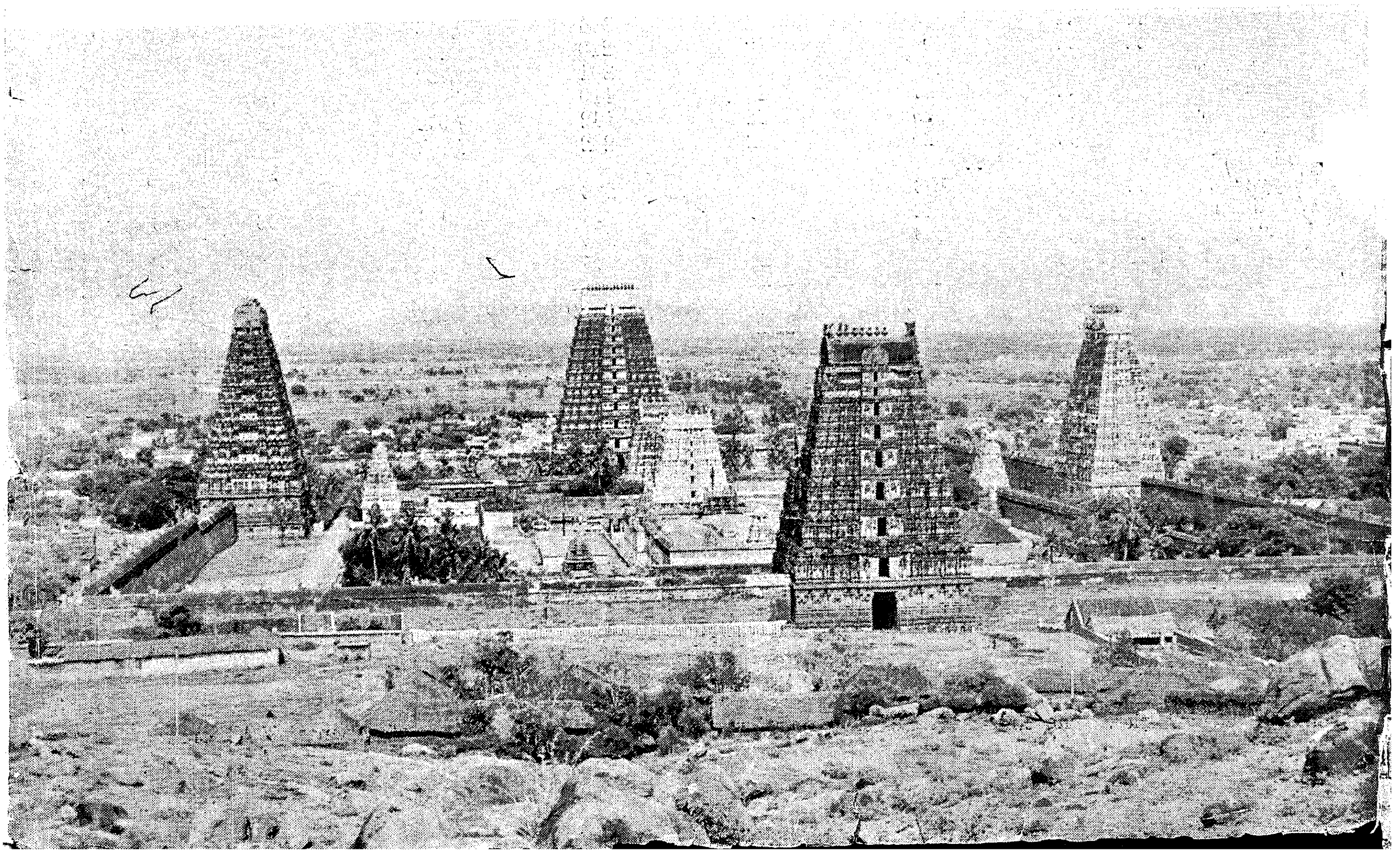
The forests of the district are of great value and are a good source of revenue to the Government.

Climate and rainfall.

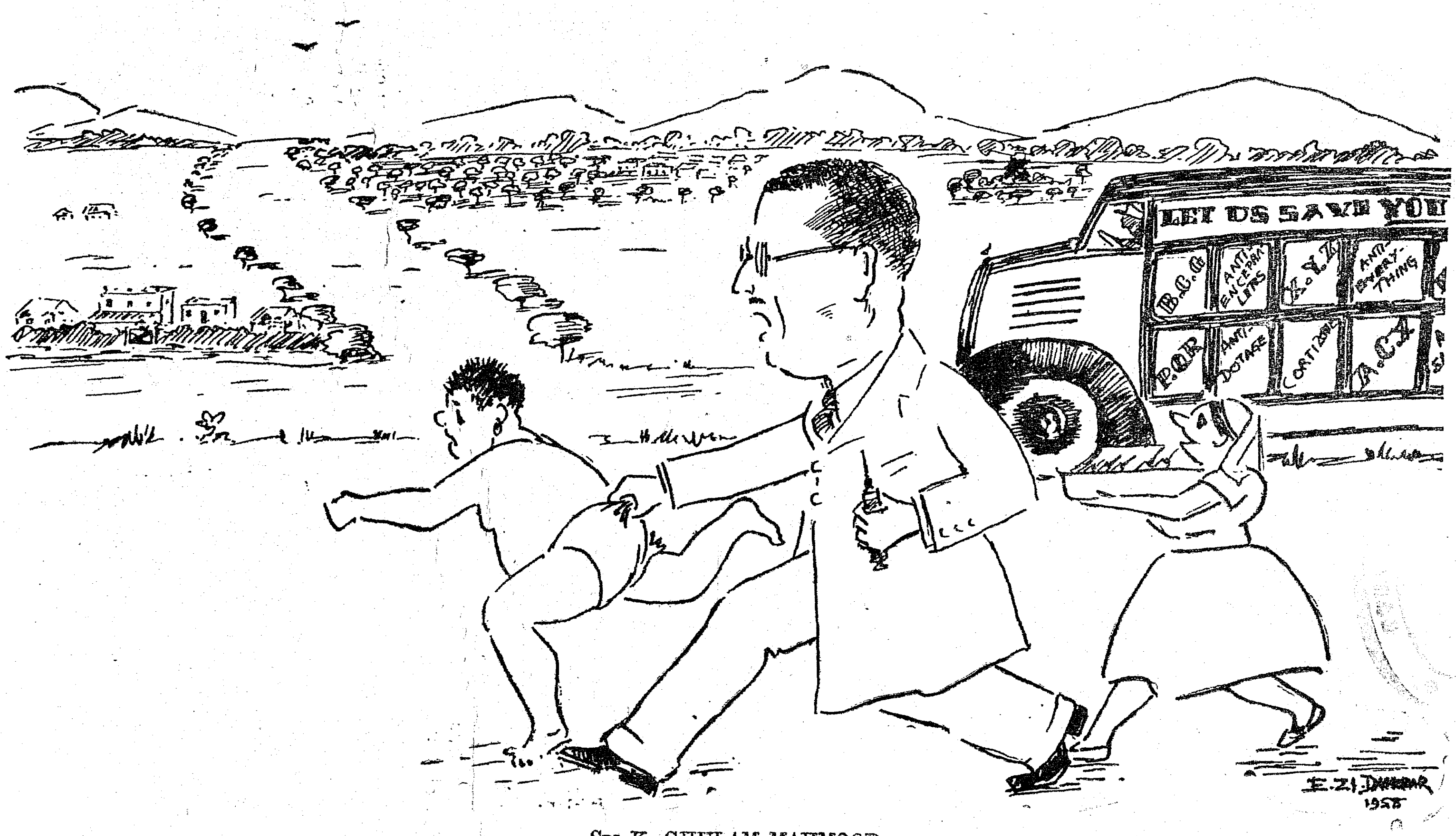
The climatic conditions of the district are as varied as are its physical aspects. The highest temperature recorded in recent years is 112° and the lowest is 54°. The scorching plains share with the other districts, the severity of the hot weather. The radiation of heat from the rocky hill slopes and the blinding glare of the dry sandy bed of the Palar, add to the discomfort caused by the rays of the tropical sun.

The average rainfall of the district based on the records of 70 years ending with 1939 was 37·80 inches and the average number of rainy days was 52. The minimum and maximum rainfalls were recorded in 1876 and 1903 respectively and they were 21·59 and 64·07 inches respectively. The rainy months are ordinarily from May to December. In May which is regarded as the hottest month, there is an average rainfall of 2·78 inches. The average rainfall during the south-west monsoon (June to September) is 17·59 inches and during the north-east monsoon (October to December) 14·96 inches. There have been less than 30 inches of rain only

Tiruvannamalai in North Arcot district is one of the important pilgrimage centres in South India.

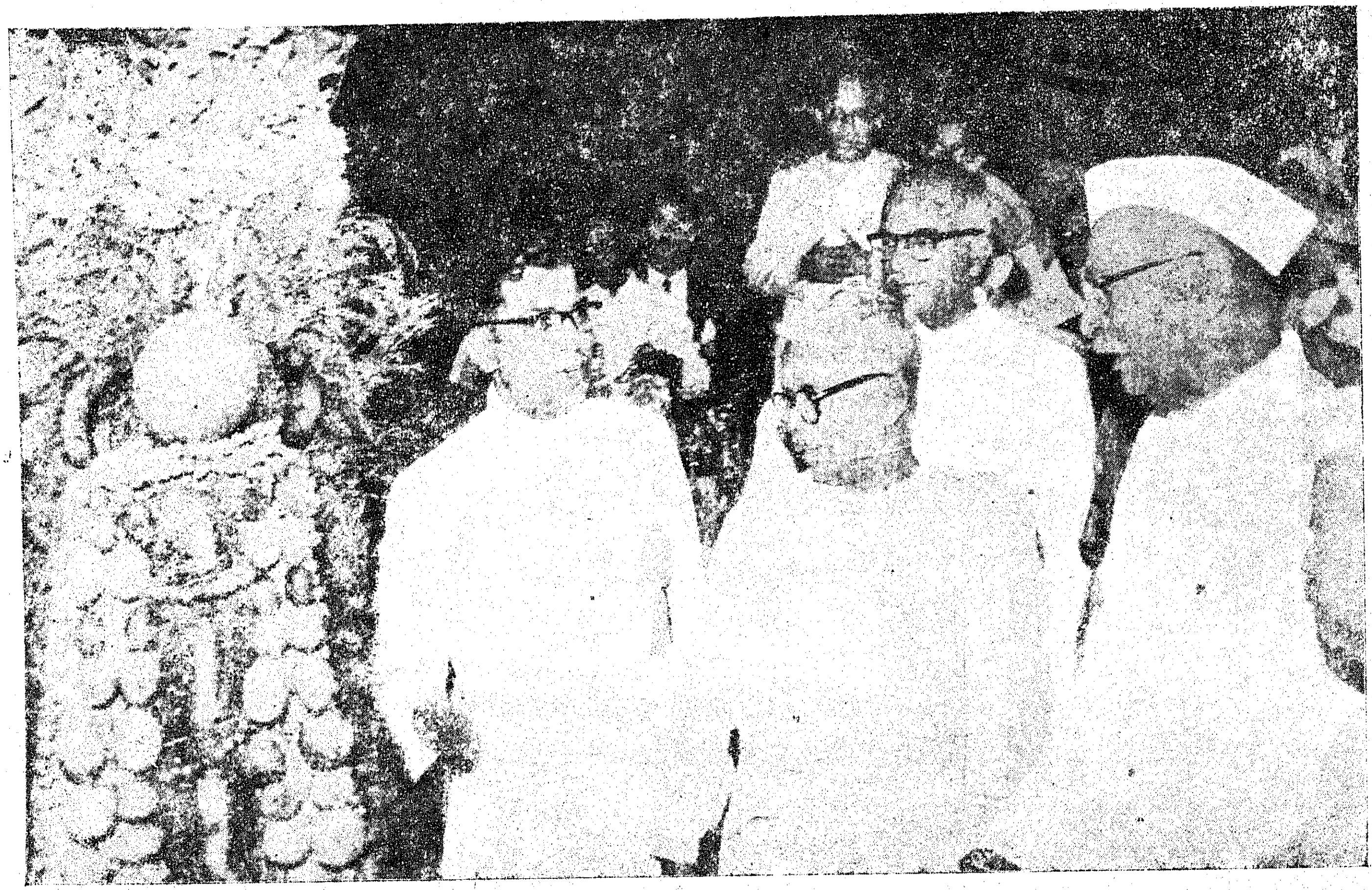


PORTRAIT GALLERY OF "PAPER GODS" OF THE SECRETARIAT



SRI K. GHULAM MAHMOOD

Additional Secretary, Health, Education and Local Administration Department, Government of Madras.



The President inspecting the products of the Agricultural Research Farm at Coimbatore.

scientists like Dr. C. A. Barber, Sir T. S. Venkataraman, Dr. Harrison, Dr. McRea Parnell, Dr. T. V. Ramakrishna Ayyar, Sri K. Rangachari, Sri Y. Ramachandra Rao and others have given the Institute a name and a fame which is second to none in the whole of India. The Institute celebrated the centenary of the Madras Herbarium, one of the best and the second largest collection of plants in the whole country, in 1954. The Golden Jubilee of the Agricultural Research Institute was celebrated with great pomp under the august presidency of His Excellency the Governor of Mysore in September 1957.

For over 25 years the Coimbatore Institute is recognized as an approved centre for post-graduate research wherefrom candidates could secure the M.Sc., and Ph. D., degrees of the Madras University. Over forty research students are working in the Institute at present for the M.Sc., and Ph.D., degrees by research. As a natural corollary to this, the Joint Indo-American team suggested in 1956, that Coimbatore should be one of the four centres in India for training scientific personnel to the highest possible level. The fulfilment of this suggestion was seen on August 10th in the laying of the foundation stone of the Regional Post-Graduate Research Institute, at Coimbatore, by the revered President of the Indian Union, Dr. Rajendra Prasad.

The Institute proposes to have faculties in Agronomy, Botany, Chemistry, Horticulture, Entomology and Plant Pathology and to train 40 persons a year in these. Of these, 20 will be the quota allotted to Madras and the rest to the other States of the Indian Union. When other Regional Post-Graduate Research Institutes are established, the latter quota will be reserved for the candidates from Andhra Pradesh, Mysore and Kerala State. Both M.Sc. (Ag.) and Ph.D, degrees are proposed to be awarded to the successful trainees by the University of Madras. The starting of a post-graduate institute for training our youth to the highest level of academic worth and efficiency is a venture of great significance to the nation. Fortunately, with such eminent scientific and academic talent as we have, right down from our present Vice-Chancellor, who is also the President-elect of the Indian Science Congress this year, we have every hope that the new Institute will shine as one of the brightest stars in the scientific and educational firmament of India.

Science ON THE MARCH

Low-Cost Protein Food from Groundnut Kernels.

Search for a low-cost protein food has led research workers at the Central Food Technological Research Institute in Mysore to the development of a process for the manufacture of edible groundnut flour from groundnut kernels. The flour is of a high food value and has been found to contain more than twice as much protein as some of the common pulses. It can replace cereal flours in many food preparations, besides raising their nutritional value.

The process is really very simple. The groundnut kernels are cleaned to remove foreign matter. The cleaned kernels are gently roasted for about ten minutes in an open pan or an electric roaster. The roasted kernels are then cooled and the cuticle removed. The decuticled kernels are then crushed in an oil expeller. The light yellowish-brown press cake so obtained is powdered in a disintegrator or a flour mill. The resulting groundnut cake flour has an attractive light yellow colour and has a delicious taste and flavour. Moreover, it can be kept well in airtight containers for many months without developing any bad qualities.

Calcutta Institute Produces Artificial Porcelain Teeth.

A process for making artificial procelain teeth from indigenous raw materials has been developed at the Central Glass and Ceramic Research Institute, Calcutta.

The process consists in preparing a fine powder of felspar and china clay mixed in proper proportions. After removal of traces of iron the stain is mixed and the powder is made into a dough with an organic binder and water. The teeth are made after the dough is pressed in suitable moulds, finished and fixed. They are then mounted on plastic bases or cardboard pieces for storage.

Porcelain teeth prepared by this technique compare favourably in all respects with the imported teeth. These teeth have been tested in the Calcutta Dental College and Hospital and also independently by two eminent dentists of Calcutta who have given favourable reports.

One of the main advantages of this new process is that the basic raw materials like felspar and china clay are easily available within the country.

Paint Warns of Dangerous Heat.

A new paint developed by an American company gives a visual warning or alarm when objects painted with it get too hot. The paint is brushed or sprayed on metal pipes and boilers and will change its colour from blue to white when the temperature reaches 585 degrees Fahrenheit.

Steel Protected from Moisture Damage.

A United States company that distributes sheet and structural steels has developed a method that effectively protects shipments of the metal from moisture.

Its method, developed as a result of a moisture condensation study, protects shipments from damage from the time they are received at the warehouse, until they are delievered to purchasers. The company's warehouse uses two forced air space heaters that moisture that might be injurious to stored steel is removed by this dehumidifying system.

(*Continued from page* 16)

enforcement of public health achieves little and for a short while too. Permanency or sustained public health progress on a wide scale through enforcement of regulations have not been obtained anywhere, except under extraordinary circumstances. On the other hand, we see nations that are advanced in public health, which they have attained not by enforcing health laws but by educating their peoples. They have attempted to educate their people in public health at all levels—at the level of the pre-school and school children, the under-graduate and post-graduate, the home and the barn, the farm and the factory, anywhere and everywhere. Added to this, of course, is the raising of the standards of living too.

With this knowledge to fortify our thinking, if we do try to educate our people in public health—which is not merely preventive medicine but promotive medicine, not merely a medical science but a social science—we should naturally be able to progress, if not by leaps and bounds, by stages at least. Let us hope that everyone who is concerned with the moulding of public opinion will come to our aid in the fulfilment and advancement of public health, a great national welfare activity.

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KANCHEE

(*Continued from page* 15)

As already narrated, the temple was managed and looked after by Sri Thathadesika till about 1632. Thereafter his discendents continued to manage the affairs of the temple. With the decline of the Vijiyanagar dynasty, the waning of the royal influence has set in, and the very existence of the temples in south had become precarious owing to the threat of Muhamadan invasion. As was the wont on earlier occasions the faithful adherents of Lord Varada segregated Him to a place in the south called Udayarpalayam (in Tiruchirappalli district), in or about 1690. Later when the scare subsided one Thirumalai Thathachari who was then incharge of the temple tried to get back the deity. But the Udayarpalayam Zamindar would not part with it. With great dejection and despair Sri Thathachar was observing penance for a long time till 1710 A.D. when he managed to get back the Idol with the help of one Thodarmal through one Athanjeer by threat of force by taking two regiments of troops to Udayarpalayam. It is said in lieu of this help which Athanjeer rendered Sri Thirumalai Thathachar entered into an agreement with him, in 1711 allowing him (the Jeer) to render the *Diviyaprabandam* in the temple, with the commencement of his acharya's *thaniyan*. From that time the thathachars in their joy over this happy restoration of the Lord, virtually left the defacto management of the temple itself in the hands of the jeer and his descendents till 1792. Since one Rama Row who was managing the affairs in 1792 misbehaved the Collector appointed one Srinivasaragavachari representing the thathachars to look after the temple affairs. Even he was found to be unsuitable. The East India Company in 1796, ultimately took over the administration through the Collector till 1842 when the Government handed back the management of the institution to one Kumarathathachariar a descendent of the original "Church wardens" of the temple. Even today the descendents of Lakshmi Kumarathathacharya alone continue to be the hereditary trustees of the temple, under a scheme framed by the High Court, Madras in 1941. The administration of the temple according to that is vested in three trustees, two honorary trustees elected from and by the members of the thathachari family and one non-Vaishnavite Brahmin appointed by the Hindu Religious Endowments authorities as Executive Trustee.

THE GRAND ANICUT

This historic Grand Anicut dating back to second century is visited by a large number of tourists and Engineers alike. To make the place more impressive, it was electrified, and gardens and parks were laid out two years ago.

The Cauvery river is called the "Ponni" or the golden river. Whether it is due to the gold held in the river water as is popularly believed in some quarters or whether it is due to the large production of wealth for which the river is responsible, it is immaterial for us to debate. Suffice it to say, that thanks to the premier efforts of *Raja Karikala Chola*, who as early as the second century had the vision and energy to tame the river and harness its waters for the benefit of the Tanjore district, it was possible for the district to be hailed as the "*Granary of South India.*" Although done in a rather crude manner, in those early days, the efforts of Karikala have borne fruit beyond, perhaps, his most sanguine expectation and the work has formed the basis for further improvements from the 19th century onwards and in its present condition, it is amply fulfilling its onerous task of distributing supply to the old and new deltas in Tanjore district to an extent of 11·2 lakhs of acres besides sending down supplies to a further extent of 1·08 lakhs of acres under the Lower Coleroon Anicut System in South Arcot district. As a humble tribute to the memory of the pioneer Royal Engineer of the second century A.D. (Raja Karikala Chola) a statue of his has been recently erected to adorn the park at the Grand Anicut.

At about 16 miles below Upper Anicut, the rivers Cauvery and Coleroon are linked by Ullar. This Ullar, which must have been a breached course of the Cauvery (draining the floods of Cauvery into Coleroon) appears to have created some difficulty in maintaining the required supply in Cauvery. This difficulty was surmounted by the *Chola Kings* in about the second century by building up the Grand Anicut across the Ullar. It was built by the Raja Karikala Chola and dates back to second century A.D. The Anicut formerly consisted of a solid mass of rough stone in clay, 1,080 feet long, 40 to 60 feet in width and 15 to 18 feet high, stretching across the outlet in a serpentine form. "The old dam" effectively withstood the floods of 1,600 years by the mere inertia of its materials. Its main function was to retain the supply in Cauvery and its branches and pass the surplus into Coleroon. A portion of the crest was in oghee shape while the rest was with steps.

It is on record that thousands of Ceylonese labourers were employed for the work, after the conquest of Ceylon by Cholas. This was the first step in the taming of the Cauvery and bringing in irrigational facilities to a large extent in Tanjore delta. In addition to the construction of the anicut, the Chola rulers seem to have constructed flood embankments to the Cauvery and dug a number of channels and canals from the river thus laying a firm foundation for the pattern of irrigation that is obtaining now. Even though there was a steady progress under irrigation in this area, history does not record any further spectacular work. On the other hand, the whole system suffered deterioration owing to quarrels and internecine wars among the rulers. When the British took over Tanjore from the Maharattas in 1800, the irrigation works were in a badly neglected condition and the supplies received in the Cauvery were found totally inadequate and sporadic. It was therefore their first responsibility to look into the problems of delta and put it into proper order. In 1804, Captain Coldwell repaired the Grand Anicut, and provided dam stones on the crest, and at the same time raised the river

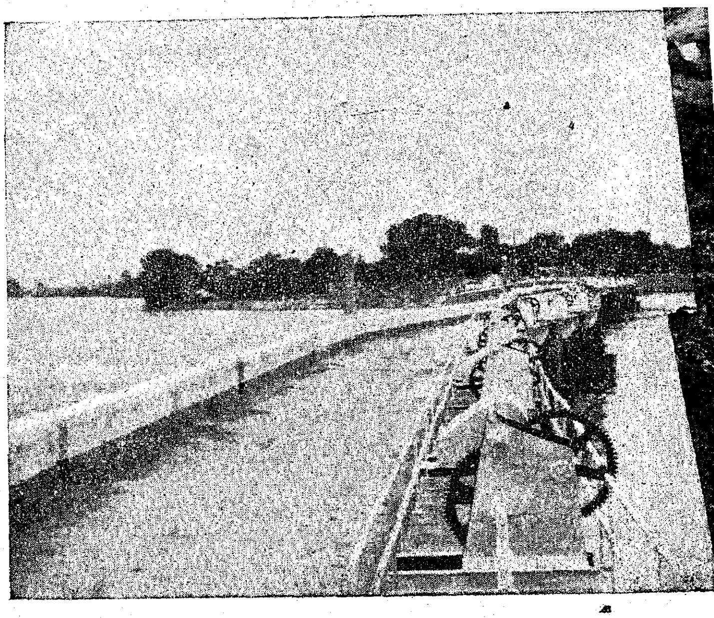
A panoramic view of the Reservoir.

embankments above the Grand Anicut, thus forcing more water into Cauvery. During subsequent years, the embankments of various rivers and channels in the delta were repaired and extended.

In 1830, the ten scouring sluices 3 feet wide and 4 feet high with their sills at 179.60 were built with the object of scouring away the silt deposits in front of the anicut and regulators. The crest of the anicut was a little over 9 feet above the bed. In about 1840, a bridge over it was built using the existing work as foundations. By the construction of the bridge piers and dam stones over the anicut (for $2\frac{1}{4}$ feet high), the effective length of the anicut was reduced to 735 feet. In 1886, the dam stones were removed and automatic falling shutters 2′ 10″ high were fitted on the crest. In 1899, these falling shutters were removed and lift shutters of 5 feet height and 32 feet span were fitted in all the thirty arches of the bridge. In 1909, three of these arches in the scouring sluice portion were washed away and subsequently restored omitting the scouring sluices. New scouring sluices, five vents of 20′ × 10′ provided with radial shutters were built at the right end of the end of the anicut.

To protect the Grand Anicut foundations from scour, a bed regulator was constructed for a length of 1,100 feet from the nose between the anicut and the scouring sluices on the upstream side with the object of deflecting the low water course away from the anicut towards the Vennar Regulator and thence to the scouring sluices.

As an outcome of the record flood of 1924, which was calculated to be of the order of 475,000 cusecs at the Upper Anicut, a road dam or byewash was constructed in the low padugai at about a mile upstream of the Grand Anicut on the left bank of Cauvery to serve as an escape for high floods. In the event of any extraordinary flood, this byewash would surplus about 98, 600 cusecs into Coleroon, ensuring safety of the work at Grand Anicut to a considerable extent.



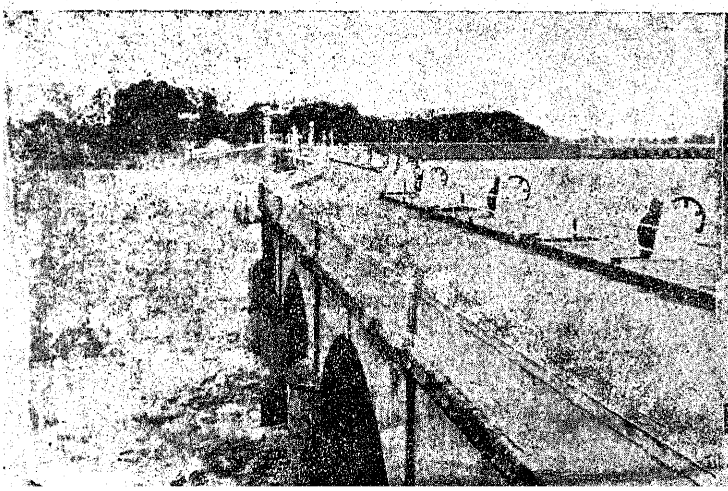
The Motorable road on the Anicut.

The Grand Anicut or "Kall Anai" as locally called in Tamil, is a name loosely applied to a group of works which comprise (i) Grand Anicut proper, i.e., the dam with the lift gates constructed across Ullar (described above), (ii) a group of scouring sluices, (iii) a group of regulators at the heads of Cauvery and Vennar which irrigate the old delta, and (iv) the new head sluice of Grand Anicut Canal constructed in the early thirties of this century. A small shrine dedicated to Shri Hanuman, the guarding deity, is located in the middle of the anicut. This shrine attracts considerable number of pilgrims.

The Cauvery and Vennar Regulators

About the year 1886, the imposing regulators of Cauvery and Vennar were constructed immediately downstream of and almost at right angles to the Grand Anicut for distributing the available flow between the

The President visited the Grand Anicut on 9th August during his recent tour in Tamilnad.



The Governor inaugurated the John Memorial Community Hall on 29th July 1958 at the Kanyakumari District.

The Annual Day of the Government Vigilance Home and Stri Sadana was celebrated on 10th July 1958 at "Everest", Kutcheri Road, Mylapore, Sri C. Subramaniam, Finance Minister, presiding. The Minister is seen addressing the gathering.

Smt. Sakuntala Subramaniam distributed prizes to the inmates on the occasion.